

THE
ZOOLOGICAL RECORD

VOLUME THE FIFTY-THIRD

BEING

RECORDS OF ZOOLOGICAL LITERATURE

RELATING CHIEFLY TO THE YEAR

1916

COMPILED BY THE ZOOLOGICAL SOCIETY OF LONDON WITH ASSISTANCE FROM THE
REGIONAL BUREAUS OF THE INTERNATIONAL CATALOGUE.

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C. T. REGAN, W. L. SCLATER, AND M. HINTON

SUPERINTENDED BY

DAVID SHARP, M.A., F.R.S., F.Z.S., &c.

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LONDON:
PRINTED FOR THE SOCIETY;
SOLD AT THEIR HOUSE IN REGENT'S PARK
M.DCCCCXIX.

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EXPLANATORY.

This Volume is printed in the Divisions enumerated on p. iv.

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In the Subject Index of each Division authors are quoted by name only. The full references will be found in the Title Section of the Division.

The Literature indexed is mainly that of 1916 but includes entries for earlier years that have been received too late for inclusion in previous volumes.

On account of the present international situation, the Royal Society of London found itself unable to undertake at present any financial responsibility for any volumes of the International Catalogue subsequent to those of the Fourteenth Annual Issue.

Under these circumstances the Zoological Society of London arranged to undertake the issue of the present volume, which is the fifty-third of the Zoological Record, and would have been N. Zoology of the Sixteenth Annual Issue of the International Catalogue. Its preparation has been conducted as closely as possible on the model of the previous volumes prepared jointly by the International Catalogue and the Zoological Society.

It can now be purchased from the Zoological Society of London at the price of £2, either in the binding of the Zoological Record or in series with the International Catalogue.

Volume 54, dealing with the Literature of 1917, is in preparation.

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ARRANGED BY

D. SHARP

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II. PROTOZOA

ARRANGED BY

R. W. HAROLD ROW.

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(b) Foraminifera.

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†*Bolivina hentyana* sp. n. Red Lime-stone, Grange Burn, near Hamilton Victoria, CHAPMAN Victorian Nat. 32 p. 145.

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†*Hemidiscus transiens* sp. n. p. 71 Perm-Ablagerung Ost-Russlands (Russ.) ČERDYNCEV Kazanī Trd. Obšč. jest. 46 No. 5.

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†*Lingulina semivelata* p. 17, *media* p. 18, *familiaris*, *fallax* p. 19, *pijmae* p. 20, spp. n. Perm-Ablagerungen Ost-Russlands (Russ.), ČERDYNCEV Kazanī Trd. Obšč. jest. 46 No. 5.

†*Lingulinopsis permiana* p. 22, *rotulaeformis* p. 24, spp. n. Perm-Ablagerungen Ost-Russlands (Russ.), ČERDYNCEV T.c.

†*Lituituba centrifuga* Perm-Ablagerungen Ost-Russlands (Russ.), ČERDYNCEV T.c. p. 67.

(N-9974 e)

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†*Orthocerina hexagona* sp. n. Perm-Ablagerungen Ost-Russlands (Russ.), ČERDYNCEV Trd. Obšč. jest 46 No. 5 p. 45.

†*Orthophragmina omphalus* Notizen, RUTTEN Jaarb. Mynw. Ned. Indie Batavia 43 p. 74.

†*Psammodiscus anguineus* pp. 67-70 *filiformis* p. 70, spp. nn., Perm-Ablagerungen Ost-Russlands (Russ.), ČERDYNCEV T.c.

†*Sagenella regularis* sp. n. Java, DOUVILLÉ Leiden Samml. Geol. Reichsmus. 10 p. 33.

†*Spiroclypeus pustulosus* Cretaceous and Tertiary France, DOUVILLÉ C. R. Acad. Sci. 163 p. 330.

†*Spiroplecta deflata* sp. n. p. 110, and *anceps* var. n. *infracta* p. 110, Upper Cretaceous South Africa, CHAPMAN Ann. South African Mus. 12.

†*Tetrataxis* sp. Perm-Ablagerungen Ost-Russlands (Russ.), ČERDYNCEV Kazanī Trd. Obšč. jest. 46 No. 5 p. 46.

†*Vaginulina* sp. Perm-Ablagerungen Ost-Russlands (Russ.), ČERDYNCEV T.c. p. 46.

†*Valvulina* (?) *bulloides* Perm-Ablagerungen Ost-Russlands (Russ.), ČERDYNCEV T.c. pp. 46-49.

(c) Heliozoa

[Nothing.]

(d) Radiolaria.

[Nothing.]

3. SPOROZOA.

(a) Gregarinidea.

Cystobia testiculi sp. n. from *Cerithium tuberculatum*, TREGOUBOFF Paris C. R. Soc. Biol. 79 p. 652.

Gonospora glycerae sp. n. from *Glyceria siphonostoma*, PIRELL-GOODRICH Q. J. Microsc. Soc. 61 p. 211.

Microtaeniella clymenellae systematic position discussed, POCHÉ Arch. Protistenk. 37 pp. 6-14.

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(b) Coccidiidea.

Coccidium percae sp. n. from stomach of the Perch, DUJARRIC DE LA RIVIÈRE C. R. Soc. biol. 76 p. 493.

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(c) Haemosporidia.

Babesia bovis in cattle in the Balkans, MARKOFF Arch. Schiffshyg. 20 pp. 313-335.

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Haemocystidium affinities discussed, MELLO Anais Scient. Fac. Med. do Porto 3 No. 1 pp. 1-11.

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Haemoproteus moruony sp. n. from *Copsychus saularis*, MELLO & BRAZ DE SA Ind. J. Med. Res. Calcutta 3 p. 734.—*H. columbae* notes on the life history, ARAGÃO Brazil Medico 30 pp. 353-354 361-362.—*H.* sp. n. (unnamed) from *Hemidactylus broolei*, MELLO Anais Scient. Fac. Med. do Porto 3 No. 1 p. 1.

Lankesterella amania sp. n. im Blute von *Chamaeleon fischeri* Deutsch-Ost-Afrika (Russ.+deutsch. Rés.), AVERINCEV Journ. microbiol. 1 pp. 5-7 9-10.

Laverania malariae question of intracellular conjugation discussed, SWELLENGREBEL Ned. Tijdschr. Geneesk. 60 pp. 914-923.

Leucocytogregarina niniae-kohl-yakimovae sp. n. from a fish, YAKIMOFF Rev. Zool. Russe 1 p. 97.

Piroplasma bigeminum in horses and cattle in the Balkans, MARKOFF Arch. Schiffshyg. 20 pp. 313-335.—*P.* recorded from an ox from Ouellé, RODHAIN Bul. Soc. path. exot. 9 p. 95.—*P.* sp. in *Equus caballus* im Ural-Gebiet Uebertragung (Russ.), GOLIACHOVSKIJ Veter. vrač. 9 pp. 457-459.—*P.* der Pferde, Verbreitung und Infektionsweise in Russland (Russ.), BÉLICER (109) Veterin. vrač 9 pp. 236-238.

Plasmodium achromaticum sp. n. parasite des chauves-souris du Turkestan, YAKIMOV, STOLINIKOV, KOOLĬ-YAKIMOVA Med. obozr. Moskva 77 1912 pp. 162-166.—*P. mackiei* sp. n. from *Vespertilio muricola*, MELLO & BRAZ DE SA Ind. J. Med. Res. Calcutta 3 p. 737.—*P. malariae raupachi* sp. n. in Truthühner, Fortpflanzung (Russ.), PAROVANIDZE Zakavk. veter. vöstrn. 3 pp. 86-87.—*P. tenue* merely distorted specimens of the other malaria parasites, LAWSON J. Exp. Med. 24 pp. 291-314.—*P. vivax* the so-called "intraglobular conjugation" discussed, SWELLENGREBEL Arch. Schiffshyg. 20 pp. 423-432.

Proteosoma praecox anatomy and life history described in detail, BRUG Arch. Schiffshyg. 20 pp. 289-306.—*P.* development and meaning of the "black spores" in *Culex*, BRUG Arch. Protistenk. 36 pp. 188-197.

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(d) Myxosporidia (including Microsporidia).

Ceratomyxa coris p. 4, from *Coris* spp., herouardi p. 5 from *Box salpa*, spp. n., Mediterranean, GEORGÉVITCH Bull. Inst. Océan. Monaco No. 322.—*C. herouardi* variability of form, GEORGÉVITCH C. R. Acad. Sci. 163 pp. 717-719; life history, GEORGÉVITCH T.c. pp. 983-985.

Mrazekia gen. n. p. 345 for *M. caudata* nom. n. for *Myxocystis* sp. of Mrazek from *Limnodrilus* and *Tubifex tubifex* p. 347, and *brevicauda* from *Chironomus plumosus*, *stricta* from *Lumbriculus variegatus*, *argoisi* from *Asellus aquaticus* p. 347, spp. n. LÉGER & HESSE C. R. Soc. Biol. 79.

Myxidium gadi sp. n. from *Gadus pollachia* and *Solea vulgaris* Roscoff, GEORGÉVITCH Bull. Soc. Zool. France 41 p. 88.

Myxobolus notatus sp. n. from *Pimephales notatus* Georgian Bay Canada MAJOR Trans. R. Soc. Canada 10 Sect. 4 p. 70.

Nosema pulicis sp. n. from *Ctenocephalus felis*, KORKE Ind. J. Med. Res. Calcutta 3 p. 725.

Pleistophora macrospora spore structure described, LÉGER & HESSE C. R. Soc. Biol. Paris 79 pp. 1049-1053.

Sphaeromyxa gasterostei sp. n. from *Gasterosteus spinachia* Roscoff, GEORGÉVITCH Bull. Soc. Zool. France 41 p. 94.

e) Actinomyxidia.

[Nothing.]

(f) Sarcosporidia.

Sarcosporidia, general account of the life history of the group, KOCK, S. African J. Sci. 12 pp. 200-212.

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(g) Haplosporidia.

Bertramia diglenae sp. n. from *Diglena catellina*, KONSULOFF Arch. Protistenk. 36 p. 352.

SPOROZOA INCERTAE SEDIS.

[Various and uncertain.]

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Pirhemocytion tarentolae, anatomy described in detail, CHATTON & BLANC Paris C. R. Soc. Biol. 79 pp. 39-43.

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in a case of chronic fever, FEDOROVITCH Ann. Inst. Pasteur 30 p. 249.—*T. spp. n.* [four, all unnamed] from *Cryptoprocta ferox* Madagascar, *Carpophaga concinna* Ann. Is., *Coluber melanoleucus* Mexico, and *Pratincola caprata* India, respectively, PLIMMER Proc. R. Soc. B. 89 pp. 291-296.—*T. cuniculi* recorded from hares, SACEGHEM Bull. Soc. path. exot. 9 pp. 432-435.—*T. sp.* in birds from Brazil, CARINI & MACIEL Bul. Soc. path. exot. 9 pp. 247-265.

4. MASTIGOPHORA.

(a) Flagellata.

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Chilomitrus lagostomi sp. n. from *Lagostomus maximus* Argentina, FONSECA T.c. p. 377.

Chilomonas paramoecium, structure and division of nucleus described, BÉLAË Arch. Protistenk. 36 pp. 283-293.

Chrysarachnion gen. n. *insidians* sp. n. PASCHER Arch. Protistenk. 37 p. 17.

Chrysocrinus gen. n. *hydra* sp. n. Germany, PASCHER op. cit. 36 p. 115.

Chrysoglena gen. n. *mallomonadacearum*, *verrucosa* spp. n. environs de Petrograd, sporulation (Russe et rés,

franç.), VISLOUCH Jour. microbiol. 1 pp. 263-266, 276.

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Chrysostephanosphaera globulifera, environs de Petrograd, stades de la transformation (Russe et rés. franç.), VISLOUCH Journ. microbiol. 1 pp. 253-277.

Chrysothylakion gen. n. *vorax* sp. n. Germany, PASCHER Arch. Protistenk. 36 p. 116.

Colacium multoculata recorded from Iowa, BRUMFIEL Science New York (N. Ser.) 42 p. 430.

Copromastix gen. n. *prowazeki* sp. n. from human faeces Brazil, ARAGÃO Brazil-Medico 30 p. 7.—*C. P.* redescribed, ARAGÃO Rio de Janeiro Mem. Oswaldo Cruz 8 Fasc. 2 p. 64.

Copromonas ruminantium sp. n. from dung of ruminants, WOODCOCK Phil. Trans. Roy. Soc. B. 207 p. 395.

Dinobryon protuberans var. *obtusatus* var. n. pp. 270, 276, *proteus* sp. n. pp. 271, 276-277 environs de Petrograd (Russe + rés. franç.), VISLOUCH Journ. microbiol. 1.

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Heteromastix gen. n. for *Heteromita* cf. *lens* from dung of ruminants, WOODCOCK Phil. Trans. Roy. Soc. B. 207 p. 380.

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Leptomonas elmassiani sp. n. from *Aranjia angustifolia*, MIGONE Bull. soc. path. exot. 9 p. 356.

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Trypanoplasma carassii sp. n. (undescribed), SWEZY Berkeley Univ. California Publ. Zoology 16 pp. 208 and 220.—*Trypanoplasma heliciis* structure and life history, BELAË Arch. Protistenk 36 pp. 255-283.

Trypanosoma lineatus (sic) sp. n. from *Vampirops lineatus*, ITURBE & GONZALEZ Caracas 1916.—*Trypanosoma triatomae* sp. n. from *Triatoma protracta* from nests of *Neotoma fuscipes*, KOFOID & McCULLOCH Berkeley Univ. California Publ. Zoology 16 p. 115.—*T. brucei*, question of its identity with the Trypanosomes causing sleeping sickness in Nyasaland, MAYNARD S. Africa Inst. Med. Res. No. 6 pp. 1-39.—*T. cazalbouri* in Cattle in Ouellé, RODHAIN Bul. Soc. path. exot. 9 p. 95.—*T. c.*, *Cynomyceris straminea* not susceptible to, RODHAIN & VAN DEN BRANDEN Bull. Soc. path. exot. 9 pp. 234-236.—*T. c.* experiments on transmission, SACEGHEM Bul. Soc. path. exot. 9 pp. 569-573.—*T. congolense* in cattle and sheep in Ouellé, RODHAIN Bul. Soc. path. exot. 9 p. 95.—*T. equiperdum* d'origine russe identique à la dourine d'Algérie, non identique à la Trypanosomide des chameaux et des ânes du Turkestan et à *T. brucei* etc. (Russe), YAKIMOV Chron. arch. veter. nauk. 1915 pp. 388-394.—*T. evansi* experimental conveyance, MITZMAIN New Orleans Med. Surg. J. 69 pp. 416-424.—*Trypanosoma gambiense* measurements of Dutton and Todd's Gambia strain, CHALMERS & O'FARRELL J. Trop. Med. Hyg. 19 pp. 189-194.—*T. g.* resistant to human serum, MESNIL & BLANCHARD Bul. Soc. path. exot. 9 pp. 81-85.—*T. g.* incubation period and duration of infection in rats and guinea pigs, MORGAN Rept. Michigan Acad. Sci. 16 pp. 104-108.—*T. g.*, *Cynomyceris straminea* susceptible to infection, RODHAIN & VAN DEN BRANDEN Bull. Soc. path. exot. 9 pp. 234-236.—*T. lewisi* recorded from the black rat, at Accra, MACFIE Rep. Accra Lab. for 1915 p. 72.—*T. l.*, *Cynomyceris straminea* not susceptible RODHAIN & VAN DEN BRANDEN Bull. Soc. path. exot. 9 pp. 234-236.—*T. rhodesiense*, susceptible to human serum, MESNIL & BLANCHARD Bul. Soc. path. exot. 9 pp. 81-85.—*T. theileri*, transmission, NOELLER Berlin Tierärztl.

Wochenschr. 32 pp. 457-460.—*T. wrublewskyi* = Teilungsstadium von *T. theileri* (Russ.), YAKIMOVA Arch. veter. nauk. 44 pp. 1043-1045.—*T. spp.* (*angolense-cazalbouri-vivax* and *congolense* groups) comparative effects of trypanosan, trypanblue and salvarsan, RODHAIN & VAN DEN BRANDEN Bull. Soc. path. exot. 9 pp. 236-241.—*T. sp. ?* (typ. *lewisi*) in the blood of *Alactaga saliens* description (Russ.) KOLICOV Russ. vrač. 13 pp. 884-885. *T. sp.* (de Nagana) Altérations morphologiques sous l'action d'agents chimiothérapeutiques, VERBICKIJ Journ. microbiol. 2 pp. 231-252.—*T. sp.* (type Nagana-Surra) in Kameelen des Ural-Gebietes (Russ.), ŠUKEVIČ Arch. veter. nauk. 44 pp. 1320-1323.—*T. sp.* (type Nagana-Surra) des chameaux du Turkestan, variabilité des dimensions (Russe + franç.), YAKIMOV et POPOVA Journ. microbiol. 2 pp. 253-258.—*T. sp.* (type Nagana-Surra) der Esel und Kameele in Turkestan (Russ.), YAKIMOV u. ŠOCKOR Mess. méd. vét. soc. 26 pp. 407-408.—*Trypanosoma* spp. recorded from Portuguese cattle, BETTENCOURT & BORGES Arq. Inst. Bact. Camara Pestana 4 pp. 179-182.—*Trypanosoma* sp. des chameaux inoculé aux animaux domestiques (Russe), URANOV Arch. veter. nauk. 45 pp. 1007-1021.

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(b) Silicoflagellata.

[Nothing.]

(c) Dinoflagellata.

List of the Dinoflagellates collected on the Empurda coast, MALUQUER Barcelona Junta Ci. Nat. 1916 p. 234.

Dinoflagellata der Wolgamündung, DUBROVIN KAMINSKIJ & PEŠUDOV St. Petersburg Scripta bot. 28 pp. 101-112.

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(d) Rhynchoflagellata.

[Nothing.]

(e) **Pyrityoflagellata.**

Pyrityoflagellata class n., to include *Ebria*, HANSEN-OSTENFELD Kjøbenhavn Vid. Selsk. Skr. (8) 2 pp. 118 and 170.

5. CILIOPHORA (INFUSORIA).

(a) **Ciliata.**

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III. PORIFERA OR SPONGIDA

ARRANGED BY

R. W. HAROLD ROW.

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IV. COELENTERATA

ARRANGED BY

F. W. EDWARDS.

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/ *Solenopodium* gen. n. near *Anthothela*, KÜKENTHAL Zool. Anz. 47 p. 172.

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†*Cyathophyllum approximans* sp. n. Victoria Silurian, CHAPMAN Rec. Geol.

Surv. Vict. 3, 3 1914, p. 304.—*C. syrtlanense* sp. n. carbonifère de l'Oural, SOŠKINA Bull. sect. géol. Soc. nat. 3 p. 53.—*C. minus, hexagonum* Kolonielbildung, YAKOVLEV 44.

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†*Fistulipora victoriae* sp. n. Victoria Silurian, CHAPMAN Rec. Geol. Surv. Vict. 3 3 1914 p. 310.

Gonactinia prolifera Murmanküste PAX Petrograd Trav. lab. zool 4 p. 169.

†*Isastraea boekmi* sp. n. Timor Trias. VINASSA DE REGNY Pal de Timor 6 8 1915.

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†*Leptoria carnei* sp. n. New Guinea Eocene, GREGORY & TRENCH Geol. Mag. 3 p. 485.

Lithostrotion irregulare Koloniebildung, YAKOVLEV 44.

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boniferous, MATHER Bull. Soc. Lab. Denison Univ. 18 1915.

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†*Myriophyllia timorica* s p. n. Timor Trias, VINASSA DE REGNY Pal de Timor 6 8 1915.

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†*Plesiastrea horizontalis* sp. n. New Guinea Eocene, GREGORY & TRENCH Geol. Mag. 3 p. 486.

†*Porites deshayesana* var. n. *inequisepta* New Guinea Eocene, GREGORY & TRENCH Geol. Mag. 3 p. 530.

†*Stylina macgregori* sp. n. New Guinea Eocene, GREGORY & TRENCH Geol. Mag. p. 484.

†*Stylophora papuensis* sp. n. New Guinea Eocene, GREGORY & TRENCH Geol. Mag. 3 p. 483.

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†*Zaphrentula* gen. n. *primitiva* sp. n. Russia Carboniferous, BOLCHOVITINOVA Bull. sect. géol. Soc. nat., 3 p. 67.

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V. ECHINODERMA

ARRANGED BY

H. B. PRESTON.

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†*Gymnodiadema*, LAMBERT 93.

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†*Hemipedina*, BATHER 7.

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†*Laganum multiforme* K. Mart. var. n. *tayabum* Miocene Philippines, PRATT & SMITH Phil. J. Sc. A. 8 p. 325 pl. ii fig. 3.

†*Lovenia forbesi*, HAWKINS 75; *L.* CHAPMAN 17; *L.*, LAMBERT 96.

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†*Pericosmus*, LAMBERT 96.

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†*Salenia dombeensis* Lor. var. n. *triangularis* Cretaceous Benguela, GREGORY Trans. R. Soc. Edinburgh 51 pp. 586-587; *S. volana* sp. n. Upper Cretaceous U.S.A., WHITNEY Bull. Amer. Pal. 26 p. 4 pl. I figs. 1-9.

†*Schizaster subrhomboidalis*, HERKL. PRATT & SMITH 139; *S.*, CHEECHIA-RISPOLI 22 & 23; LAMBERT 96; TOULA 154.

†*Schizechinus*, LAMBERT 96.

†*Schizobrissus*, LAMBERT 96.

†*Scutella*, LAMBERT 96.

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pp. 21-55.

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†*Argentinaster bodenbenderi* sp. n.
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†*Clarkeaster* gen. n. Type *C. pers-*
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ington Proc. Biol. Soc. 29 p. 61.

†*Devonaster*, RUEDEMANN 143.

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†*Eucrinaster pusillis* sp. n. Devon
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Bull. 189 pp. 58-59 pl. xvii figs. 1-2;
E. yachalensis sp. n. Silurian Argentina,
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†*Eugasterella* with *E. bicatenulata*,
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†*Klasmura* gen. n. with *K. mirabilis*,
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†*Promopaleaster*, RUEDEMANN 143.

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†*Balanocrinus pentagonalis*, RIABININ 142; *B.*, STEINMANN 151.

†*Caryella* gen. n., FOERSTE Bull. Sci. Lab. Denison Univ. 18 p. 340.

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†*Ctenocrinus*, KEGEL 86.

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†*Eupachyrcrinus*, MATHER 110.

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†*Stereobrachiocrinus* gen. n. Genotype *S. pustulosus* sp. n. Lower Carboniferous U.S.A., MATHER Bull. Sci. Lab. Denison Univ. 18 p. 108 pl. iii figs. 9-9A.

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†*Blastoidocrinus carcharideus*, HUDSON 82.

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ARRANGED BY

R. W. HAROLD ROW.

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(f) Echiuroidea.

[Nothing.]

2. GEPHYREA (=SIPUNCULOIDEA).

[Nothing.]

3. PRIAPULOIDEA.

[Nothing.]

4. PHORONIDEA.

[Nothing.]

5. PTEROBRANCHIATA.

[Nothing.]

VII. BRACHIOPODA AND BRYOZOA

BY

F. W. EDWARDS.

(a) BRACHIOPODA

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†*Brachythyris laticosta* sp. n. Arkansas Carboniferous, MATHER Bull. Sci. Lab. Denison Univ. 18 1915 p. 187.

†*Camarotoechia sjedovi* p. 44, *Kojewnikowi* p. 45, *weberi* p. 46, Devon von Nordost-Sibirien, TOLMATSCHOW Mém. Soc. minéral 50.

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†*Hustedia brentwoodensis* p. 195, *miseri* p. 196, spp. n. Arkansas Carboniferous, MATHER Bull. Sci. Lab. Denison Univ. 18 1915.

†*Keyserlingina darvasica* sp. n. Schwagerinen-Horizont vom Darvas, TSCHERNYSCHEW Mém. Com. géol. 104 p. 13.

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†*Leiorhynchus pauciplicatus* sp. n. Nordost Sibirien Devon, TOLMATSCHOW Mém. Soc. minéral 50 pp. 35 and 51.

†*Lingula minuscula* sp. n. Maine Silurian, WILLIAMS & BREGER U.S. Geol. Surv. Prof. Paper 89 p. 20.

†*Lingula hubbardi* sp. n. Montana Devonian, HAYNES Ann. Carnegie Mus. 10 p. 30.

†*Lingula brookvillensis* sp. n. Indiana Silurian, FOERSTE Bull. Denison Univ. 18 p. 308.

†*Liothyrella* gen. n. type *Terebratula* ~~ava~~ Brod., THOMSON Trans. N.Z. Inst. 48 p. 44.

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†*Productella curvata* sp. n. Nordost-Sibirien Devon, TOLMATSCHOW Mém. Soc. minéral 50 p. 42.

†*Productus morrowensis* p. 152, *welleri* p. 155, *fayettevillensis* p. 163 spp. n. Arkansas Carboniferous, MATHER Bull. Sci. Lab. Denison Univ. 18 1915.

†*Productus giganteus*, BOGOLIUBOV, 2.

†*Productus longispinus* var. n, *minor* AKENTJEV, 1.

†*Productus darvasicus* sp. n. Darvas Schwagerinen-Horizont, TSCHERNYSCHEW Mém. Com. géol. 104 p. 31.

†*Productus erebus* sp. n. Ural carboniferous, FREDERICKS Kazan Trd. Obšč. jest. 47 No. 5 p. 29.

†*Pugnoides triangularis* sp. n. Arkansas Carboniferous, MATHER Bull. Sci. Lab. Denison Univ. 18 1915 p. 175.

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†*Spirifer sophiae*, *hassaki*, **spp. n.** Graz Palaeozoic, HERITSCH Denkschr. k. ak. Wiss. 92 p. 580.

†*Spirifer lyraeformis* **sp. n.** Darvas Schwagerinen-Horizont, TSCHERNYSCHEW Mém. Com. géol. 104 p. 21.

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†*Spirifer arenosus* var. *n. simplex* Maine Silurian, WILLIAMS & BREGER U.S. Geol. Surv. Prof. Paper 89 p. 86.

†*Spiriferina darvasica* **sp. n.** Darvas Schwagerinen-Horizont, TSCHERNYSCHEW Mém. Com. géol. 104 p. 20.

†*Spiriferina spirigeroides* p. 60, *oppeli-quenstedti* p. 61, Germany, *dumortieri* p. 61 France, **spp. n.** Jurassic, ROLLIER Mém. Soc. pal. suisse 41 No. 2 1915.

†*Squamularia* Synonymie, diagnose, distribution, FREDERIKS 11.

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ARRANGED BY

H. B. PRESTON.

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Variation and Aetiology = 2223 :—

General Treatises	} 24
Teratology, Phylogeny and Relationship	
Evolution	

Distribution = 2227 :—

General
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(a) Recent :—

(a) Marine :—

Arctic Ocean	} 25
North Atlantic Ocean, Caribbean Sea and Gulf of Mexico	
Mediterranean Sea, Black Sea	...	...	...	...	...	...
South Atlantic Ocean...	...	...	...	...	...	...
Indian Ocean, Red Sea	...	...	...	...	...	...
Malaysia	...	...	...	...	...	...
Pacific Ocean	...	...	...	...	...	...
Southern Ocean	...	...	...	...	...	...
Antarctic Ocean	...	...	...	...	...	...

(\beta) Non-Marine :—

Denmark = 2227 <i>da</i>	} 25
Sweden	...	...	...	...	...	...
Russia = 2227 <i>db</i>	...	...	...	...	...	...
Holland = 2227 <i>dd</i>	...	...	...	...	...	...
British Islands = 2227 <i>de</i>	...	...	...	...	...	...

(β) Non-Marine—continued:—

France = 2227 <i>df</i>	} 26
Spain and Portugal = 2227 <i>dg</i>	...	...	...	...
Switzerland = 2227 <i>di</i>	...	...	...	...
Austria-Hungary = 2227 <i>dk</i>	...	...	...	...
Balkan Peninsula = 2227 <i>dl</i>	...	...	...	...
Asiatic Russia = 2227 <i>ea</i>	...	...	...	...
Eastern Siberia = 2227 <i>eab</i>	...	...	...	...
British India, etc. = 2227 <i>ef</i>	...	...	...	...
Malaysia, Philippine Islands, etc. = 2227 <i>eg</i>	...	...	...	...
Persia = 2227 <i>eh</i>	} 26
China = 2227 <i>eb</i>	...	...	...	...
Japan = 2227 <i>ec</i>	...	...	...	...
Asiatic Turkey = 2227 <i>ei</i>	...	...	...	...
N. Africa = 2227 <i>fa</i>	...	...	...	...
W. Africa = 2227 <i>fd</i>	...	...	...	...
E. and C. Africa, etc. = 2227 <i>ff</i>	...	...	...	...
C. Africa	...	...	...	...
S. Africa = 2227 <i>fg</i>	...	...	...	...
Alaska = 2227 <i>ga</i>	} 26
Canada = 2227 <i>gb</i>	...	...	...	...
United States = 2227 <i>gf</i>	...	...	...	...
N.E. United States = 2227 <i>gg</i>	...	...	...	...
S.E. United States = 2227 <i>gh</i>	...	...	...	...
W. United States = 2227 <i>gi</i>	...	...	...	...
Mississippi River System = 2227 <i>gk</i>	...	...	...	...
Mexico = 2227 <i>gl</i>	...	...	...	...
Guatemala = 2227 <i>hb</i>	...	...	...	...
West Indies = 2227 <i>hc</i>	} 26
Brazil = 2227 <i>hg</i>	...	...	...	...
Argentina, Paraguay and Uruguay = 2227 <i>hi</i>	...	...	...	...
New South Wales = 2227 <i>ie</i>	...	...	...	...
S. Australia = 2227 <i>ig</i>	...	...	...	...
W. Australia = 2227 <i>ih</i>	...	...	...	...
N. Atlantic Ocean = 2227 <i>la</i>	} 26
Pacific = 2227 <i>n</i>	...	...	...	...

(b) Fossil:—

Quaternary	} 26
Cainozoic	...	...	...	...	...
Pleistocene	...	...	...	...	...
Tertiary	...	...	...	...	...
Pliocene	
Miocene	
Oligocene	} 27
Eocene	
Mesozoic	
Cretaceous	
Jurassic	
Triassic	

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HEDLEY Aust. Ant. Exp. 1911-1914
vol. 4 p. 55.

d/ †*Rimosodalphinella* sec. n. (*Borsonia*),
COSSMANN Essais Pal. Comp. 1915
[1916] p. 229.

†*Surcula kelirensis* sp. n. Java Mio-
cene, MARTIN Leiden Samml. geol.
Reichsmus N. F. 2 p. 228; *S.* with *S.*
gesteri sp. n. Eocene California, DICKER-
SON Univ. Cal. Pub. Geol. 9 p. 499.

Taranis aculeata, *microscopica*, spp. n.,
Tasmania, MAY Proc. R. Soc. Tasmania
1915 pp. 83-84.

Terebra rambhaënsis Preston =
Vanesia rambhaënsis Preston, PRESTON
Rec. Ind. Mus. 12 p. 32.

†*Terebra sokkohensis*, *progoënsis* *boma-*
sensis, spp. n., Java Miocene, MARTIN
Leiden Samml. geol. Reichsmus N. F. 2
pp. 225-226.

†*Turris stocki* sp. n. Eocene California,
DICKERSON Univ. Cal. Pub. Geol. 9
p. 499; *T.* DALL 83.

HARPIDAE, OLIVIDAE, MARGINELLIDAE,
VOLUTIDAE & MITRIDAE.

† *Drilluta* gen. n. *D. communis* sp. n.
Cretaceous Tennessee, WADE Philadelphia Proc. Acad. Sci. 68 pp. 458-461.

Harpa with *H. costata* var. *letifica*
var. n. Hab. ? MELVILL J. Conch. 15
pp. 25-40.

† *Harpa muticaeformis* sp. n. Java
Miocene, MARTIN Leiden Samml. geol.
Reichsmus N. F. 2 p. 231.

† *Lyria* with *L. mansfieldi* sp. n. Oligo-
cene Georgia, DALL U. S. Nation. Mus.
Proc. 51 pp. 504-505; *L. figarii* sp. n.
Cretaceous Egypt, GRECO Palaeont. Ital. 22 p. 138.

Marginella diplostreptus nom. n. for
M. biplicata, TATE & MAY non krauss ;
M. auriculata, georgiana, caducocincta,
spp. n., Tasmania, MAY Proc. R. Soc.
Tasmania 1915 pp. 76, 87-88; *M. pro-*
blematica sp. n. Victoria, GATLIFF &
GABRIEL Proc. R. Soc. Victoria 29
p. 104; *M. schepmani* nom. n. for *M.*
abyssicola Schepman, TOMLIN Proc.
Malac. Soc. 12 p. 64; *Marginella tom-*
lini, taylori, spp. n., S. Africa, SHACKLE-
FORD Ann. S. Afric. Mus. 13 pp. 193-
194; *M. seminula, glauca, ventricosa*,
TOMLIN 382; *M. hyalina*, HEDLEY 166;
M. varia, SOW., TOMLIN, 380; *M. GAT-*
LIFF & GABRIEL 132.

† *Marginella siliciflua*, *halensis*,
spp. n., Oligocene Georgia, DALL U. S.
Nation. Mus. Proc. 51 p. 504; *M.*
taylori, schmidti, spp. n., Miocene U. S. A.
OLSSON Bull. Amer. Pal. 27 pp. 9-10;
M. ickei, nanggulanensis, spp. n., Java
Miocene, MARTIN Leiden Samml. geol.
Reichsmus N. F. 2 p. 232.

Mitra fidis sp. n. S. Africa, SOWERBY
Ann. Mag. Nat. Hist. 18 pp. 491-492.

† *Mitra molengraaffi, bomasensis, keli-*
rensis, arntzenii, sokkohenensis, spp. n.,
Java Miocene, MARTIN Leiden Samml.
geol. Reichsmus N. F. 2 pp. 234-237;
M. mauryi sp. n. Miocene U. S. A.,
OLSSON Bull. Amer. Pal. 27 p. 11; *M.*
syra, DALL 83.

Oliva peruviana vadi nom. n. for *O. p.*
castanea "Ford" Johnson non Dtz.,
VANATTA Nautilus 29 p. 132

† *Ptychoris isidis* sp. n. Cretaceous
Egypt, GRECO Palaeont. Ital. 22 p. 139.

† *Tectaplica* gen. n. *T. simplica* sp. n.
Cretaceous Tennessee, WADE Philadel-
phia Proc. Acad. Sci. 68 p. 457.

† *Turricula progoënsis, deningeri*, spp.
n., Java Miocene, MARTIN Leiden
Samml. geol. Reichsmus N. F. 2 p. 288.

† *Voluta*, GRECO 143.

† *Volutoderma*, GRECO 143.

FASCIOLARIIDAE, TURBINELLIDAE,
BUCCINIDAE, NASSIDAE, COLUM-
BELLIDAE, MURICIDAE &
CORALLIOPHILIDAE.

† *Anarithma* gen. n. type *Columbella*
lachryma, Gask.; *A. metula*, IREDALE
Proc. Malac. Soc. 12 pp. 27-32.

† *Anomalofusus* subgen. n. (*Fusus*) *F.*
(*A.*) *substriatus* sp. n. Cretaceous Ten-
nessee, WADE Philadelphia Proc. Acad.
Sci. 68 pp. 461-462.

† *Barbitonia* subgen. n. type *Fusus gr-*
ithriticus Bern, DALL Washington Proc.
Biol. Soc. 29 p. 7.

Buccinidae, DALL 92.

Buccinum sericatum, DEEJUGIN 100.

Busycon, WARREN 414.

† *Chrysodomus coalingensis* sp. n.
Pliocene California, NOMLAND Univ.
Cal. Pub. Geol. 9 p. 205; *C. martini*
sp. n. Eocene California, DICKERSON
Univ. Cal. Pub. Geol. 9 p. 488.

Columbella rustica, SCHITZ 337.

Columbellidae, DALL 84.

† *Coralliophila sokkohenensis* sp. n. Java
Miocene, MARTIN Leiden Samml. geol.
Reichsmus N. F. 2 p. 241.

† *Fasciolaria bilineata* sp. n. Eocene
California, DICKERSON Univ. Cal. Pub.
Geol. 9 p. 493; *F.* GRECO 143.

† *Ficopsis cooperii* fig. Eocene Cali-
fornia, DICKERSON Univ. Cal. Pub.
Geol. 9 p. 492 pl. xxxvii fig. 7.

† *Fusinus merriami* sp. n. Eocene Cali-
fornia, DICKERSON Univ. Cal. Pub. Geol.
9 p. 493; *F. nexilis*, DALL 83.

Fusitriton aurora sp. n. off Coast of S.
Australia, HEDLEY Aust. Ant. Exp.
1911-1914 vol. 4 p. 55.

† *Fusus*, GRECO 143.

† *Galeodea sutterensis* sp. n. Eocene
California, DICKERSON Univ. Cal. Pub.
Geol. 9 p. 492.

- Helicofusus* sec. n. type *Chrysodomus laticaudatus*, DALL, DALL Washington Proc. Biol. Soc. 29 p. 8.
- Hindsia*, IREDALE 190.
- †*Hydrotribulus* gen. n. *H. nodosus* sp. n. Cretaceous Tennessee, WADE Philadelphia Proc. Acad. Sci. 68 pp. 464-465.
- Japelson* sec. n. type *Buccinum hirasei* Pils., DALL Washington Proc. Biol. Soc. 29 p. 8.
- Kerguelenia redimiculum*, HEDLEY 166.
- Lutifusus* sec. n. type *Chrysodomus griseus* DALL, DALL Washington Proc. Biol. Soc. 29 p. 8.
- Latisipho* sec. n. type *Chrysodomus hypsolispus*, DALL, DALL Washington Proc. Biol. Soc. 29 p. 7.
- †*Metula harrisi* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 494.
- Microfusus* sec. n. type *Chrysodomus acutispiratus* Sow., DALL Washington Proc. Biol. Soc. 29 p. 8.
- †*Murex perangulatus* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 206; *M. rufirupicolus* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 506; *M. wanneri* sp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N. F. 2 p. 240; *M. (Ocinebra) nashi* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 495.
- Nassa* with *N. orissaensis* var. n. *eunurensis* Madras, PRESTON Rec. Ind. Mus. 12 p. 28; *N.* with *N. kempii*, *phoenicensis*, spp. n., Andaman Ids., PRESTON Rec. Ind. Mus. 12 pp. 88-89.
- †*Nassa smithiana*, *gastrophila*, *alumnensis*, *consensoides*, *shacklefordensis*, spp. n., Miocene U. S. A., OLSSON Bull. Amer. Pal. 27 pp. 12-14.
- Nassarius*, IREDALE 190.
- Nassodonta* with *N. gravellyi* sp. n. Enakulam India, PRESTON Rec. Ind. Mus. 12 pp. 28-29.
- Neobuccinum eatoni*, HEDLEY 166.
- †*Nyctilochus* with *N. thunani* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 pp. 496-497.
- Oenopota davisi* sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 vol. 4 p. 54.
- †*Ornopsis* gen. n. *O. glenni*, *elevata*, spp. n., Cretaceous Tennessee, WADE Philadelphia Proc. Acad. Sci. 68 pp. 463-464.
- Pareuthria innoceus*, HEDLEY 166.
- †*Perissolax gabbi* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 497.
- Probuccinum* with *P. tennistriatum* sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 vol. 4 p. 58.
- Prosipho* with *P. hunteri*, *madisgani*, *mundus*, Smith var. *macleani*, spp. & var. n., Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 vol. 4 pp. 56-57.
- †*Purpura turris* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 86.
- Retifusus* subgen. n. type *Tritonium jessoense*, Schr., DALL Washington Proc. Biol. Soc. 29 p. 8.
- †*Siphonalia sutterensis* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 498.
- †*Strepsidura howardi* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 498.
- Sulcosipho* sec. n. type *Chrysodomus tabulatus* Bd., DALL Washington Proc. Biol. Soc. 29 p. 7.
- †*Sycum* (*Palaeatractus*) *figarii* sp. n. Cretaceous Egypt, GRECO Palaeont. Ital. 22 p. 163.
- Thais carinifera*, ANNANDALE & KEMP, 7.—*T. lapillus*, COLTON 66.
- †*Trematonotus pritchardi*, CHAPMAN 59.
- Trophon* with *T. condensatus* sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 vol. 4 pp. 60-61.
- †*Trophon magister* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 207.
- Turbinella pyrum* varr. n. *obtusa*, *acuta*, *globosa*, *comorinensis* Indian Ocean HORNELL Mem. Ind. Mus. 6 pp. 111-118; *T.* VREDENBURG 405.
- †*Turbinella lynchi* and *T. doderleiniana* [ANON] 9.

Typhis pauperis sp. n. New Zealand, MESTAYER Trans. N. Zeal. Inst. 48 p. 127.

Vexillum pumilio sp. n. Tasmania, MAY Proc. R. Soc. Tasmania 1915 p. 85.

†*Xancus wilsoni*, DALL 83.

Zafra columnaria sp. n. Tasmania, MAY Proc. R. Soc. Tasmania 1915 p. 89.

Zafra gen. n. type "*Colombella* [sic] *isomella* Duclos," IREDALE Proc. Malac. Soc. 12 p. 32.

LOTORIIDAE, CASSIDIDAE, DOLIIDAE, CYPREIDAE, STROMBIDAE, APORRHAIIDAE & STRUTHIOLARIIDAE.

†*Aporrhais*, GRECO 143.

Bursa rubeta, HEDLEY 167; B., COOKE 72.

†*Bursa victrix* sp. n. Oligocene Georgia DALL U. S. Nation. Mus. Proc. 51 p. 506.

†*Cassis denseplicata* sp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N. F. 2 p. 243; C., DALL 83.

†*Cymatium cecilianum* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 507.

Cypraea hesitata nom. n. for *C. umbilicata* Sol., IREDALE Proc. Malac. Soc. 12 p. 93; *C. undata buttoni* var. n. Fiji Isds., OLDROYD Nautilus 29 p. 107; *C. variolaria* var. n. *splendens* Japan and Seychelles, *C. erosa* var. n. *galbula* and *lucida* Seychelles, *C. e* var. n. *pallens* Ceylon, *C. esontropia* var. n. *pellucida*, *C. rashleighana* var. n. *eunota* and *transpiciens* Hawaii, TAYLOR J. Conch. 15 pp. 122–123; *C. venusta* var. *bakeri* W. Australia, *C. miliaris* var. *gabrielii* N. Territory Australia var. n., GATLIFF Viet. Nat. 32 pp. 147–148; C., BYNE 51.

Erato guttula Sow., TOMLIN 384.

Eugyrina gigantea, COOKE 71.

†*Eutritonium bomasense* sp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N. F. 2 p. 242.

†*Harpagodes*, GRECO 143.

Lambis, IREDALE 188.

Neosimnia catalinensis sp. n. California, BERRY Nautilus 30 p. 21.

†*Orthaulax*, DALL 83.

†*Persona djunggranganensis* sp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N. F. 2 p. 242.

†*Rimella Mordax, sokkohenensis* spp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N. F. 2 pp. 246–247.

†*Pterodonta*, GRECO 143.

†*Pugnellus australis* sp. n. Cretaceous New Zealand, MARSHALL Trans. N. Zeal. Inst. 48 p. 120.

Strombus leidas, LIN., IREDALE 189

†*Strombus spolongensis* sp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N. F. 2 p. 275; S. DALL 83; S. GRECO 143.

†*Terebellum papilliferum cinctum*, spp. n., Java, Miocene, MARTIN Leiden Samml. geol. Reichsmus N. F. 2 p. 248.

Triton gyrynoides, DE GREGORIO 145.

†*Tritonium*, GRECO 143.

Trivia, IREDALE 188.

CERITHIIDAE, PLANAXIDAE, TRICHOTROPIDIDAE, VERMETIDAE, TURRITELLIDAE AND CECIDAE.

†*Aclisina*, COSSMANN 74.

Bittium graveleyi sp. n. Cochin backwater Ennakulam India, PRESTON Rec. Ind. Mus. 12 p. 29; *B. perspicuum* sp. n. Ceylon, SOWERBY Proc. Malac. Soc. 12 p. 75.

†*Bittium silicium* sp. n. Oligocene Georgia, DALL U.S. Nation Mus. Proc. 51 p. 510.

†*Cerithiopsis diagona* sp. n. Oligocene Georgia, DALL U.S. Nation. Mus. Proc. 51 p. 516; *C. dumblei*, *orovillensis* spp. v. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 489; *C. smithfieldensis* sp. n. Miocene U.S.A., OLSSON Bull. Amer. Pal. 27 p. 16.

Cerithium vulgatum, KUŠAKEVIČ 219; *C. tuberculatum*, TREGBOUFF 387.

†*Cerithium brauneri* sp. n. Cretaceous California, HALL & AMBROSE Nautilus 30 p. 69; *C. wanneri* sp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N. F. 2 p. 248; *C. silicifluviu*, *mascotianum*, *halense*, *vaughani*, *cookei*, *corallicolum*, *entextile*, *vaginatum*, *insulatum*, spp. n. Oligocene Georgia, DALL U.S. Nation. Mus. Proc. 51 pp. 511–516; *C.* (with *C. Cimolothium*) *anachoreta* (*Vulgocerithium*) *radamesis*, *C. hori*, spp. n., Cretaceous Egypt, GRECO Palaeont. Ital. 22 pp. 123, 133, 135, 154.

†*Diaostoma georgiana* sp. n. Oligocene Georgia, DALL U.S. Nation. Mus. Proc. 51 p. 510.

†*Heterocerithiopsis* subgen. n. (*Cerithiopsis*), OLSSON Bull. Amer. Pal. 27 p. 16.

†*Horizostoma*, COSSMANN 74.

†*Mesalia sphyngis* sp. n. quaternaria var. n. Cretaceous Egypt, GRECO Palaeont. Ital. 22 pp. 127-129.

†*Nerinella*, GRECO 143.

Potamides djunggrangensis, deningeri, Volzi, kelirensis, dolfusi, teschi, icki, progoensis, spp. n., Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N.F. 2 pp. 249-253.

†*Procerithium* with *P. pentataeniatum* nov. mut., *P. mesalioides* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 pp. 118-120.

†*Promathilda*, COSSMANN 74.

†*Purpuroidea*, COSSMANN 74.

†*Spirocyclina*, COSSMANN 74.

Strephopoma nucleocostata sp. n. Tasmania, MAY Proc. R. Soc. Tasmania 1915 p. 92.

Trichotropis bruceana nom. n. for *T. antarctica*, MELVILL & STANDEN J. Conch. Leeds 15 p. 90; *T. antarctica*, HEDLEY 166.

Trichotropis bruceana nom. n. for *T. antarctica*, MELVILL & STANDEN, J. Conch. Leeds 15 p. 50; *T. Antarctica* HEDLEY 166.

Triphora [vide etiam *Triphoris*] *obliqua* sp. n. Tasmania, MAY Proc. R. Soc. Tasmania 1915 p. 91; *T. smithi* Sow. and *T. gracilior*, Smith, SMITH 383.

†*Triphoris* [vide etiam *Triphora*] *barlesi*, *dupliniana*, spp. n. Miocene U.S.A., OLSSON Bull. Amer. Pal. 27 p. 17.

†*Turritella buwaldana*, kawi, andersoni, lawsoni, spp. n. Eocene California, DICKERSON Univ. Cal. Pub. geol. 9 pp. 500-502; *T. with T. halensis* sp. n. Oligocene Georgia, DALL U.S. Nation. Mus. Proc. 51 p. 517; *T. nova* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 208; *T. teschi*, *spolungensis*, spp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus. N.F. 2 pp. 255-256; *T. with T. terebralis appplanata*, *T. vermicularis*

bijugata, varr. n., Miocene S. W. Africa, WAGNER Union S. Africa Mines Dept. Geol. Surv. Mem. No. 7 pl. xxix; *T. (Peyrothia) aidae*; (*Torcula*) *cleopatrae*; (*Haustator*) *ramesis*, spp. n. Cretaceous Egypt, GRECO Palaeont. Ital. 22 pp. 119-120, 126; *T.*, COSSMANN 74.

†*Tympanotonus*, GRECO 143.

MELANIIDAE, PSEUDOMELANIIDAE, PLEUROCERIDAE, LITTORINIDAE AND FOSSARIDAE.

†*Amberleya*, COSSMANN 74.

Conradia cancellata sp. n. Madras, PRESTON Rec. Ind. Mus. 12 p. 30.

†*Dissochilus*, COSSMANN 74.

Doryssa transversa jaryensis, *tapa-jozensis*, subspp. n. *D. rex*, *D. r. regina*, *D. globosa*, *starksi* spp. & subsp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 pp. 649-652.

†*Dumesella*, COSSMANN 74.

†*Fossarus*, COSSMANN 74

Goniobasis pennsylvanica sp. n. W. Pennsylvania, PILSBRY Nautilus 29 p. 4

†*Gouetina* gen. n. (*Littorinidae*), COSSMANN Essais Pal. Comp. 1915 [1916] p. 69.

†*Hallstadtia* gen. n. (*Fossaridae*) COSSMANN Essais Pal Comp. 1915 [1916] p. 97.

Hemisinus flammeus sp. n. *elongatus* subsp. n. Brazil, BAKER, Philadelphia Proc. Acad. Nat. Sci. 65 p. 657.

†*Heterospira*, COSSMANN 74.

†*Lacuna*, COSSMANN 74.

†*Lacunina*, COSSMANN 74.

†*Larinopsis* gen. n. type *Larina* (?) *turbinata*, Gat. and Gab., GATLIFF & GABRIEL Proc. R. Soc. Victoria 29 p. 104.

†*Lithoglyphus neumayri*, GRIGOROVICH-BEREZOVSKIJ 147.

Littorina, with *L. palliata* varr. n. *turritella*, *carinata*, *auricularia*, *L. rudis* var. n. *conoidea* Iceland, SCHLESCH Naturalist London 1916 pp. 279-280; *L. littorea*, KANDA 208.

†*Littorina*, COSSMANN 74.

†*Littorinopsis* and *L. tournoueri* sp. n. France Miocene, COSSMANN Essais Pal. Comp. 1915 [1916] pp. 61, 262.

†*Loxonema sinuosa* var. n. *australis* Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 p. 96; *L.* with *L. welleriana* sp. n. Silurian U.S.A., WILLIAMS & BREGER Bull. U.S. Geol. Surv. 89 pp. 29-80; *L. wortheni* sp. n. Carboniferous U.S.A., WELLER Contrib. Walker Mus. Chicago 1, p. 261.

Melania, GERMAIN 137.

†*Melania fossariformis*, GRIGOROVICH-BEREZOVSKIJ 147.

†*Melanopsis*, GRIGOROVICH-BEREZOVSKIJ 147; *M. rhodensis*, KALIČKI 207.

†*Microdomus*, COSSMANN 74.

†*Micromelania* (?) *curta* sp. n. *plano-conveza* var. n., NALIVKIN Mém. Com. géol. 116 pp. 21-22, 31.

†*Nina*, COSSMANN 74.

†*Oncospira*, COSSMANN 74.

†*Ooliticia*, COSSMANN 73 and 74.

†*Palaeonaricia*, COSSMANN 74.

†*Paleunema*, COSSMANN 74.

†*Planaxis densestriatus* sp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N.F. 2 p. 254.

Pseudobaicalia elegantula, DYBOWSKI 110.

†*Pseudolacuna*, COSSMANN 74.

†*Pseudomelania*, COSSMANN 73.

†*Rigauria*, COSSMANN 74.

†*Risella* and *R. (Risselloidea) bajocica* sp. n. France [? Tertiary], COSSMANN Essais Pal. Comp. 1915 [1916] pp. 73, 263.

†*Rothpletzella*, COSSMANN 74.

†*Spiromema*, COSSMANN 74.

†*Sublacuna*, COSSMANN 74.

†*Tectarium*, COSSMANN 74.

SOLARIIDAE, SKENEIDAE, LITIOPIDAE, RISSIODAE, HYDROBRIDAE, VIVIPARIIDAE, VALVATIDAE, AMPULLARIIDAE AND ASSIMINEIDAE.

Alvania thouinensis, seminodosa, suprasculpta spp. n. Tasmania MAY. Proc. R. Soc. Tasmania 1915 pp. 94-95.

Amnicola neomexicana New Mexico. —*A. deserta* Utah, spp. n., PILSBY Nautilus 29 p. 111.

(N-9974 r)

Amphithalamus triangulus, aurantiocinctus, pertumidus, tiara, spp. n., Tasmania, MAY Proc. R. Soc. Tasmania 1915 pp. 95-96.

Ampullaria, GERMAIN 137; *A.* SOWERBY 358.

d/†*Angyomphalus* subgen. n. (*Rotellomphalus*), COSSMANN Essais Pal. Comp. 1915 [1916] p. 152.

†*Architectonica ultreyana* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 487.

Assemanina rufostriata sp. n. Bulgaria, HESSE Nachr. Bl. D. Malakozool Ges. 48 p. 154.

Bythinia moltischanovi sp. n. Delta of the Amur - Darja, LINDHOLM Ann. mus. zool. Ac. sc. 19 pp. 344-345; *B.* GERMAIN 137.

†*Bythinia vukotinoviči*, GRIGOROVICH-BEREZOVSKIJ 147.

Campeloma with *C. rufum meridionale, geniculiforme* subspp. n. Georgia, PILSBRY Nautilus 30 p. 42.

Cerithiopsila antarctica, HEDLEY 166.

d/†*Colpomphalus* sec. n. (*Discohelix*), COSSMANN Essais Pal. Comp 1915 [1916] p. 136.

Discohelix hedleyi sp. n. New Zealand, MESTAYER Trans-N. Zeal. Inst. 48 p. 125.

†*Discohelix*, COSSMANN 73 & 74.

Eatoniella kerguelensis, HEDLEY. 166.

Eatoniopsis ainsworthi sp. n. Macquarie Id., HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 46.

†*Eccyliomphalus*, COSSMANN 74.

†*Emmericia*, PILSBRY 309.

†*Emmericia jenkiana and candida*, GRIGOROVICH-BEREZOVSKIJ 147.

Epigrus semicinctus sp. n. Tasmania MAY Proc. R. Soc. Tasmania 1915 p. 96.

Eumeta strebeli, HEDLEY 166.

†*Euomphalus* with *E. centrifugalis* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 pp. 89-90; *E.*, COSSMANN 74; *E.*, MATHER 249.

†*Fluminicola nevadensis* sp. n. Nevada WALKER Occ. Papers. Mus. Zool. Univ. Michigan No. 29 p. 6.

†*Hippocampoides* gen. n. *H. serratus* sp. n. Cretaceous Tennessee, WADE, Philadelphia Proc. Acad. Sci. 68 pp. 466-467.

†*Homalaxis*, COSSMANN 74.

Horatia (*Hauffenia*) *micra*, P. & F. nom. n. for *Valvata micra*, PILS & FERR. PILSBRY *Nautilus* 30 pp. 83-84.

Idiopyrgus pilsbryi sp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 p. 658.

Iravadia funerea, *annandalei* COCHIN backwater, near Ernakulam India; *I. ennuensis* Madras, spp. n. PRESTON Rec. Ind. Mus. 12 pp. 30-31.

Laevilitorina claviformis sp. n. S. Shetland Isds., PRESTON Ann. Mag. Nat. Hist. 18 p. 270; L., HEDLEY 166.

Laristes, SOWERBY 358.

Lanzaia, PILSBY 309.

Leroya, SOWERBY 358.

†*Liompholus* gen. n. (*Euomphalidae*) *L. australis* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 p. 90.

Littoridina marni sp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 p. 658.

Meladomus, SOWERBY 358.

Melanella iotoides nom. n. for *M. iota*, BARTSCH S. Africa, BARTSCH *Nautilus* 30 p. 72; M. with *M. laseroni* sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 49.

†*Micromelania*, KALICKIJ 207.

Microsetia durbanensis sp. n. Durban TOMLIN J. Conch. 15 p. 119.

†*Nipteraxis* sec. n. (*Solariidae*), COSSMANN Essais Pal. Comp. 1915 [1916] p. 167.

†*Nummocalar* and *N. (Colpomphalus) thieri* sp. n. France Jurassic, COSSMANN Essais Pal. Comp. 1915 [1916] pp. 138, 268.

Ovoba cymatodes sp. n. Antarctic, MELVILL & STANDEN J. Conch. 15 p. 120.

Ovirissoa gen. n. Type *Rissoa adarensis* SMITH, HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 47.

Paludestrina jenkinsi, OLDHAM 279.

†*Platybasis* sec. n. (*Nummocalar*), COSSMANN Essais Pal. Comp. 1915 [1916] p. 140.

†*Platyschisma*, COSSMANN 74.

Potomopyrgus scottii var. n. *deilicola* Argentina, DOELLO-JURADO Physis Rev. Soc. Argentina Buenos Aires 2 p. 178.

†*Pseudomalaxis*, COSSMANN 74.

†*Riselloidea subdisjuncta* var. n. *conjuncta* Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 127.

Rissoa obeliscus, *pupoides*, *simillima*, *multilirata*, *freycineti*, spp. n. Tasmania MAY Proc. R. Soc. Tasmania 1915 pp. 92-94.

†*Rotellomphalus*, COSSMANN 74.

†*Semisolarium* gen. n. and *S. vidali* sp. n. Cretaceous, COSSMANN Essais Pal. Comp. 1915 [1916] pp. 155, 269.

†*Serpulospira* nom. mut. *Serpularia*, Roemer 1843, COSSMANN Essais Pal. Comp. 1915 [1916] p. 144.

†*Solarium sokkohense* sp. n. Java Miocene, MARTIN Leiden Samml. Geol. Reichsmus N.F. 2 p. 256; S. and S. (*Climacopora*) *grossourei* sp. n. Cretaceous, COSSMANN Essais Pal. Comp. 1915 [1916] pp. 163, 270; S. GRECO, 143.

Stenothyra perpumilis sp. n. COCHIN backwater near Ernakulam India, PRESTON Rec. Ind. Mus. 12 p. 31.

†*Straparollina*, COSSMANN 74.

†*Straparollus debilis* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 p. 92; S. COSSMANN 74; S. MATHER 249; S. WELLER 419.

Subonoba with *S. bickertoni*, *wilkesiana* spp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 pp. 47-48.

†*Tanaliopsis* subgen. n. (*Risella*), COSSMANN, Essais Pal. Comp. 1915 [1916] p. 77.

Tatea melvilli sp. n. Macquarie Isd. HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 46.

†*Torinia*, COSSMANN 74.

†*Tornidae*, CERULLI-IRELLI 55.

†*Touzinia* sec. n. (*Littorinopsis*), COSSMANN Essais Pal. Comp. 1915 [1916] p. 62.

Trachybaicalia with *T. carinato-costata bitneri* var. n. *clara*, *opaca*, *pyramidalis*, *miconella*, subvarr. n. *credneri*, var. n. *elatella*, *inflattella*, subvar. n., *sandbergeri*, *moussoni* varr. n. *dybowskiana lindholmi* var. n. Lake Baikal, DYBOWSKI Ann. mus. zool. Ac. sc. 19, pp. 300-316; *T.* with *T. carinata martensiana* var. n., *T. c. m. elencha*, *maura*, *rudis*, *picola*, *orthos*, subvar. n., *hoernesiana*, *fuchsiana*, *sturaniana*, *neumayeriana*, varr. n., Lake Baikal, DYBOWSKI Ann. Mus. zool. Ac. Sc. 19 pp. 286-298.

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Vivipara [vide etiam *Viviparus*], GERMAIN 137.

†*Vivipara* [vide etiam *Viviparus*] with *V. laskarevi* sp. n. Bessarabia, GRIGOROVIC-BERZOVSKIJ Varšova Izv. Univ. 1915 pp. 97-99.

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CYCLOPHORIDAE, CYCLOSTOMATIDAE AND TRUNCATELLIDAE.

Acicula lineata, DEAN 97.

Chondropona wilcoxi [? sp. n.] Isle of Pines, HENDERSON Ann. Carnegie Mus. 10 p. 316.

Tropidophora (*T.*) *anceps*, GERMAIN 136.

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†*Amaltheus balduri*, SOKOLOV 355.—A., PAVLOV 295.

†*Amouropsis ocalana*, DALL 83.

†*Ampullina*, DALL 83.

†*Bucanospira*, COSSMANN 74.

†*Bulimorpha pygmaea*, *whitfieldi* spp. n. Carboniferous U.S.A., WELLER, Contrib. Walker Mus. Chicago 1 p. 260.

†*Calyptraea* (*Trochita*) *trochiformis*, DALL 83.

Crepidula adunca, HEATH 164.; *C. plana*, CONKLIN 68.

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†*Crepidula inornata* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 489.

†*Cyclonema*, CHAPMAN 59.

†*Diaphorostoma retrorugatum, incisum* spp. n., Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 pp. 98-99.—D. RUEDEMANN 333.

†*Eudoptyxma*, COSSMANN 74.

Friginatica gen. n. type *Natica beddomei*, Johnston, *F. pisum* sp. n. 1916 Macquaire Isd., HEDLEY Aust. Ant. Exp. 1911-1914, Vol. 4 pp. 51-53.

†*Jurassiphorus* gen. n. (*Xenophoridae*) COSSMANN Essais. Pal. Comp. 1915 [1915] p. 188.

Lamellariopsis aurora sp. n. Antarctic HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 53.

†*Lamelliphorus* gen. n. (*Xenophoridae*) COSSMANN Essais Pal. Comp. 1915 [1916] p. 189.

Lunatia transfieldensis sp. n. S. Shetland Isds., PRESTON Ann. Mag. Nat. Hist. 18 p. 270.

Marseniopsis mollis, HEDLEY 166.

†*Meekospira minuta* sp. n. Carboniferous U.S.A., WELLER Contrib. Walker Mus. Chicago 1 p. 261.—M., MATHER 249.

Natica kempfi sp. n. Andaman Isds., PRESTON Rec. Ind. Mus. 12 p. 90.

†*Natica convexa* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 86.—*N. gesteri* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 496.—*N. (Neverita) orbicularis* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 207.—N., GRECO 143.

†*Naticopsis* with *N. eichwaldi*, Stuckenb. = *noinskii* sp. n. Carboniferous, FREDERICKS Kazani Trd. Obsč. jest. 47 pp. 10-11.—*N. wortheni*, *wartloensis* spp. n., Carboniferous U.S.A., WELLER Contrib. Walker Mus Chicago 1 p. 259.

Onchidiopsis (*Atlantolimax*) *hannai* sp. n. Behring Sea, DALL Philadelphia Proc. Acad. Sci 68 p. 375.

†*Orthonychia brevis* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 p. 96.

Pelliltorina bennetti, bransfieldensis
spp. n. S. Shetland Isds., PRESTON Ann.
Mag. Nat. Hist. 18 pp. 270-271.—
P. rossiana, HEDLEY 166.

†*Platyceras* with *P. chapmani*,
edmundi, *P. (Orthonychia) arcootooki*,
compressa spp. n., Silurian U.S.A.,
WILLIAMS & BREGER Bull. U.S. Geol.
Surv. 89 pp. 259-262.—*P.* with *P.*
minutum sp. n. Silurian Victoria,
CHAPMAN Proc. R. Soc. Victoria 29
pp. 97-98.—*P.* MATHER 249.—*P.*,
WELLER 419.

†*Platystoma*, WILLIAMS & BREGER
424.

Roya deveva sp. n. Tasmania, MAY
Proc. R. Soc. Tasmania 1915 p. 92.

Sigaretus (Eunaticina) calaraphe
sp. n. Andaman Isds., PRESTON Rec.
Ind. Mus. 12 p. 90.

†*Sphaerodoma*, MATHER 249.

†*Strophostylus*, COSSMANN 74.—*S.*
MATHER 249.—*S.* WILLIAMS & BREGER
424.

†*Subulites*, COSSMANN 74.

†*Tylostoma* with *T. atheleticum* sp. n.
Cretaceous Egypt, GRECO Palaeont.
Ital. 22 p. 131.

†*Xenophora stocki* sp. n. Eocene Cali-
fornia, DICKERSON Univ. Cal. Pub.
Geol. 9 p. 502.—*X. conchyliophora*
DALL 83.—*X.*, COSSMANN 74.—*X.*
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SCALIDAE.

†*Aclis*, COSSMANN 74.

†*Aclisina*, MATHER 249.

Crossea consobrina sp. n. Tasmania,
MAY Proc. R. Soc. Tasmania 1915 p.
97.

†*Epitonium tejonensis* sp. n. Eocene
California, DICKERSON Univ. Cal. Pub.
Geol. 9 p. 491.—*E. ? dubiosum* sp. n.
Oligocene Georgia DALL U. S. Nation.
Mus. Proc. 51 p. 506.

†*Pliciscala*, COSSMANN, 74.

†*Scala dupliniana, sheldoni* spp. n.,
S. lineata, Say var. n. *magnoliana*
Miocene U.S.A., OLSSON Bull. Amer.
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EULIMIDAE AND PYRAMIDELLIDAE.

†*Bartschella* gen. n. Type *Dunkeria*
subangulata, Carp., IREDALE Proc.
Malac. Soc. 12 p. 36.

Dunkeria, IREDALE 188.

Elusa, IREDALE 188.

Eulima immaculata fig. GATLIFF &
GABRIEL Proc. R. Soc. Victoria Pl. VII.
fig. 2 [see also id. p. 109]; *E. oxytata*,
Wats. fig. and *E. rossinsulæ* sp. n.
Andaman Isds., PRESTON Rec. Ind.
Mus. 12 p. 91 *E. schoutanica, columbiana*,
mamilla, cuneiformis spp. n., Tasmania,
MAY Proc. R. Soc. Tasmania 1915
pp. 89-90.

†*Eulimastoma* subgen. n. (*Pyramidel-*
lidae) Type *Subeulima lamberti* Souv.,
BARTSCH Nautilus 30 p. 73.

Eulimidae, JONKER 205.

†*Hypsipleura*, COSSMANN 74.

†*Microschiza*, COSSMANN 73.

Odostomia occultidens, crassicosta,
spp. n., Tasmania, MAY Proc. R. Soc.
Tasmania 1915 pp. 90-91.

†*Odostomia packi* sp. n. Eocene Cali-
fornia, DICKERSON Univ. Cal. Pub. Geol.
9 p. 498.

†*Palaeoniso*, COSSMANN 74.

†*Pyramidella kelirensis, djunggran-*
ganensis, spp. n., Java Miocene, MARTIN
Leiden Samml. Geol. Reichsmus. N. F.
2 pp. 257-258.

Pyrgulina humilis, Preston=*Pyra-*
midula (Morsmula) humilis, Preston;
P. h. var. chilkaensis, Preston=*Mor-*
mula chilkaensis, Preston, PRESTON
Rec. Ind. Mus. 12 p. 32.

Scalenostoma, BARTSCH 24.

†*Stephanoscomia*, COSSMANN 74.

Stilifer polaris sp. n. Antarctic, HED-
LEY Aust. Ant. Exp. 1911-1914 vol. 4
p. 50.—*S. sibogae*, JONKER 205.

Thyca crystallina, JONKER 205.

†*Tretospira*, COSSMANN 74.

Tropaeas, IREDALE 188.

Turbonilla lamyi sp. n. Macquarie Isd.
HEDLEY Aust. Ant. Exp. 1911-1914
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†*Undularia*, COSSMANN 74.

Vanesia ramblaensis, Preston nom. n.
for *Terebra ramblaensis*, Preston,
PRESTON Rec. Ind. Mus. 12 p. 32.

†*Zygopleura*, COSSMANN 74.

HELICINIDAE.

Helicina schereri, guajarana, laterculus, spp. n., Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 pp. 625-626.

NERITIDAE, NERITOPSIDAE, TURBINIDAE, TROCHIDAE AND CYCLOSTREMATIDAE.

†*Acrosolarium*, COSSMANN 74.

†*Astratium arnoldi* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 204.

†*Ataphrus pembertoni* sp. n. Cretaceous California, HALL & AMBROSE Nautilus 30 p. 69.—A., COSSMANN 73.

†*Aulacotrochus* gen. n. for *Trochus nitens*, Dum., COSSMANN Bull. Soc. Geol. Normandie 33 p. 131.

Brookula, HEDLEY 166.

†*Calliomphalus*, COSSMANN 74.

†*Calliostoma* with *C. fallaciosum* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 128.—*C. amneris* sp. n. Cretaceous Egypt, GRECO Palaeont. Ital. 22 p. 117.—*C. convulum* varr. n. *cingulifera*, *granulosa*, *C. striatum* var. n. *conjungens* Tertiary Italy, CERULLI-IRELLI Palaeont. Ital. 22 pp. 191-192, 200.—*C. ethegoensis* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 85.—*C. harrisianum*, *suffolkense*, spp. n., *C. (Eutrochus) shackelfordensis* ? sp. n. Miocene U.S.A. OLSSON Bull. Amer. Pal. 27 pp. 19-20.

Cantharidus variegatus sp. n. New Caledonia, SOWERBY Proc. Malac. Soc. 12 p. 75.

†*Chartronella raspaili* sp. n. France Jurassic, COSSMANN Essais Pal. Comp. 1915 [1916] p. 267.

†*Circulus schmidtii* sp. n. Miocene U.S.A., OLSSON Bull. Amer. Pal. 27 p. 18.

†*Cirridae* fam. n., COSSMANN Essais Pal. Comp. 1915 [1916] p. 197.

†*Cirrus (Spirocirrus) bigoti* sp. n. France Jurassic, COSSMANN Essais Pal. Comp. 1915 [1916] p. 270.

Cirsonella translucida sp. n. Tasmania MAY Proc. R. Soc. Tasmania 1915 p. 97,

†*Clanculus*, COSSMANN & PEYROT 75.

†*Coelocentrus*, COSSMANN 74.

†*Craspedostoma*, CHAPMAN 59.

†*Cyclonema globosa* sp. n. Carboniferous U.S.A., WELLER Contrib. Walker Mus. Chicago 1 p. 256.—C., COSSMANN. 74.

Cyclostrema microscopica Nevill fig., ANNANDALE & KEMP 7.

†*Cyclostrematidae*, CERULLI-IRELLI 55.

†*Cyclostremella magnoliana* sp. n. Miocene U.S.A., OLSSON Bull. Amer. Pal. 27 p. 24.

†*Delphinula helvetica* nom. mut. or *Adecrbis cristatus*, Mayer-Eymar, D. (*Pseudoninella*) *raulini* and var. n. *planibasis*, D. (Pr.) *falloti*, spp. n., Neogen France, COSSMANN & PEYROT Bordeaux Actes Soc. Linn. 69 pp. 228-234.; D., COSSMANN 74.

†*Eotrochus*, WELLER 419.

Ethalia capillata fig., PRESTON Rec. Ind. Mus. 12 p. 92.

†*Ethalia alexandri* sp. n. Miocene U. S. A., OLSSON Bull. Amer. Pal. 27 p. 22.

Euchelus profundior sp. n. Tasmania, MAY Proc. R. Soc. Tasmania 1915 p. 98.

†*Eucyclomphalus*, COSSMANN 74.

†*Eucyclus* and *E. capitaneus* var. n. *bruni* France Jurassic, COSSMANN Essais Pal. Comp. 1915 [1916] pp. 52, 262.

†*Gibbula* with *G. sallomacensis* n. mut. *Trochus magus* Ben.; *G. (Gibbuloidella) altispira*, *G. (Colliculus) aquitanica* and var. n. *amphibola*, *eichwaldi* and var. n. *avitensis*, spp. n.; *G. (C.) benoisti* n. mut. *G. (C.) glyphidospira*, *sosensis* spp. n. Neogen France, COSSMANN & PEYROT Bordeaux Actes Soc. Linn. 69 pp. 262-284; *G. magus*, varr. n. *perproducta*, *conica*, *perconica*, *G. filiformis* var. n. *transiens* Tertiary Italy, CERULLI-IRELLI Palaeont. Ital. 22 pp. 179-180.

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Cœlocentrum gigas, SPENCE 360.

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Microceramus perconicus anafensis f. n. Cuba, HENDERSON Nautilus 29 p. 136.

Pupa minutissima, REINHARDT 320; *P. arctica*, SCHLESCH 340.

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†*Janeira* with *J. quadricostata* var. n. *freili* Cretaceous Asia Minor, FRECH Zs. D. Geol. Ges. 68 pp. 279-280.

Lima with *L. closei* sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 pp. 23-24.

†*Lima* with *L. heterocostata* sp. n. Trias Ticino, FRAUENFELDER Ec. Geol. Helvet. 14 pp. 288-289; *L. halensis* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 493; *L. (Plagiostoma) charpiei, modeli, (Mantellum), minima, kiliani* spp. n. Mesozoic Jura Mts., ROLLIER Mem. Soc. Pal. Suisse 41 pp. 478-486; *L.* with *L. (Limatula) boonei* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 140.

Limatula deceptionensis sp. n. S. Shetland Isds., PRESTON Ann. Mag. Nat. Hist. 18 p. 271; *L. attenuata* sp. n. N. W. America, DALL U. S. Nation. Mus. Proc. 52 p. 404.

†*Mysidiopiera*, FRAUENFELDER 121.

†*Palaeolima inequicostata* sp. n. Carboniferous U. S. A., MATHER Bull. Sci. Lab. Denison Univ. 18 p. 229; *P. minor* sp. n. Carboniferous U. S. A. Weller Contrib., WALKER Mus. Chicago 1 p. 251.

Pecten tigrinus, DEBŮGIN 100.

†*Pecten clarkensis* sp. n. Cretaceous California, HALL & AMBROSE Nautilus 30 p. 68; *P. edelsteini* sp. n. Permian Carbon of Darvas, TSCHERNYSCHEW Mem. Com. geol. 164 pp. 4-5 4-42; *P. tolmani* sp. n. Miocene California, HALL & AMBROSE Nautilus 30 p. 82; *P. mstaensis* sp. n. Gov. of Moscow Lower Carboniferous, FREDERICKS Kazani Trd. Obšč. jest. 47 pp. 13-14; *P.* with *P. (Aequipecten) tschakitensis, P. (Chlamys) serratus*, Nils. var. *Kuschdulariensis* spp. and var. n. Cretaceous Asia Minor, FRECH Zs. D. Geol. Ges. 68 pp. 176-278; *P.* with *P. (Entolium) fraiponti (Aequipecten) catharinae, triboleti, (Chlamys), kiliani* spp. n. Mesozoic Jura Mts., ROLLIER Mem. Soc. Pal. Suisse 41 pp. 467-478; *P. (Neithea?) rollieri* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 134; *P.* DALL, 83; *P.*, DAS-GUPTA 95; *P.*, FRAUENFELDER 121.

†*Plagiostoma*, COSSMANN 73.

Pseudamussium incongruum, bis-triatum spp. n. N. W. America, DALL U. S. Nation. Mus. Proc. 52 pp. 403-404.

†*Spondylus flaris* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 493.

†*Syncyclonema valdaica*, FREDERICKS 123.

MYTILACEA.

†*Actinopterella* with *A. aroostooki* varr. n. *erecta, planicosta, A. concentrica, tenuiradiata* spp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 182-193.

Adula, DALL 85.

†*Anomalodonta*, FOERSTE 119.

†*Arcoperna inflata* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 494.

†*Aucella sokolowi, popilanica* spp. n. Jura Russia, KRENKEL Palaeont. Stuttgart 61 pp. 191-362; *A.*, ŽIRMUNSKIJ 435; *A.*, DAS-GUPTA 95.

†*Avicula gregoryi* sp. n. Cretaceous California, HALL & AMBROSE Nautilus 30 p. 69; *A. tenuicostata*, SINCOV 348; *A.*, FRAUENFELDER 121.

†*Byssonychia*, FOERSTE 119.

†*Congeria drvarensis* sp. n. Trias Westbosnien, TOULA Wien Jahrb. Geol. Rchs. Anst. 63 pp. 621-694.

Crenella rotundata sp. n. N. W. America, DALL U. S. Nation. Mus. Proc. 52 p. 406.

†*Cymatona*, FOERSTE 119.

Dacrydium pacificum sp. n. N. W. America, DALL U. S. Nation. Mus. Proc. 52 p. 405.

†*Daonella* with *D. caudata* sp. n. Trias Ticino, FRAUENFELDER Ec. Geol. Helvet. 14 pp. 294-295; *D. péciensis* sp. n. Trias W. Bosnia, TOULA Wien Jahrb. Geol. Rchs. Anst. 63 pp. 621-694; *D.*, MARTIN 244.

†*Dreissensia polymorpha*, GRIGOROVICH BEREZOVSKIJ 147; *D.*, NALIVKIN 269.

†*Follmannella*, WILLIAMS & BREGER 424.

Gaimardia with *G. trapezina* var. n. *coccinea* Macquarie Isd., HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 pp. 24-25.

†*Gervillia mytilopsis* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 144; G., FRAUENFELDER 121.

†*Halobia*, MARTIN 244.

†*Inoceramus stantoni* sp. n. = *acuteplicatus*, Stanton 1899 praeocc. Kreide von Nord-Sachalin, SOKOLOV Mém. Com. géolog. 83 pp. 52–54 88–90; I. with *I. sachalinensis*, *orientalis*, *elegans*, *pilvoënsis* spp. n. Cretaceous N. Sachalin, SOKOLOV Mém. Com. géolog. 83 pp. 23–47 67–83; I. *anglicus* var. n. *substriatula* Lower Cretaceous of Mangyschlak, SINC OV Mém. Soc. minéral 50 pp. 253–254; I., DAS-GULPTA 95; I., MICHAJLOVSKIJ 259; I., SINC OV 348.

Kidderia with *K. macquariensis* sp. n. Macquarie Id., HEDLEY Aust. Ant. Exp. 1911–1914 Vol. 4 p. 26.

†*Leiopteria* with *L. riesiana* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 208–212.

†*Limoptera* with *L. panciradiata* var. n. *chapmani* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 202–205.

†*Lithophaga pectinicola* sp. n. Miocene U. S. A., OLSSON Bull. Amer. Pal. 27 p. 26; *L. nuda*, DALL 83.

†*Megambonia* with *M. cardiiformis*, WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 197–201.

†*Modiola* [vide etiam *Modiolus*] with *M. fountainensis* sp. n. Carboniferous U. S. A., WELLER Contrib. Walker Mus. Chicago 1 p. 251; M., FRAUENFELDER 121.

Modiolarca trapezina, BISPINGHOFF 39.

†*Modiolaria*, DALL 83.

†*Modiolopsis* with *M. brevantica* sp. n. Palaeozoic U. S. A., FOERSTE Bull. Sci. Lab. Denison Univ. 18 p. 332.

Modiolus [vide etiam *Modiola*] (? *politus*, Verrill var) *pallidulus* sp. n. N. W. America, DALL U. S. Nation. Mus. Proc. 52 p. 404.

†*Modiolus*, DALL 83.

†*Monopteria*, MATHER 249.

Musculus niger var. n. *obesus*, *protractus*, *M. olivaceus* sp. n. N.W. America, DALL U.S. Nation. Mus. Proc. 52 p. 405.

†*Myalina* with *M. maureriana* & var. *lata* sp. & var. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 212–216; *M.* with *M. orthonota* sp. n. Carboniferous U. S. A., MATHER Bull. Sci. Lab. Denison Univ. 18 pp. 219–221; *M.*, WELLER 419.

†*Mytilus anarekensis* sp. n. Jurassic or Cretaceous Persia, FISCHER Wien Beitr. Pal. Geol. Öst.-Ung. 27 pp. 207–273; *M. kawi* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 206; *M.*, FRAUENFELDER 121.

†*Pinna*, COSSMANN 73.

†*Posidonia*, FRAUENFELDER 121.

†*Praeavicula* gen. n. (*Pteriidae*) with *P. brevis* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 205–208.

†*Pseudomonotis precursor*, *inflata* spp. n. Carboniferous U. S. A., MATHER Bull. Sci. Lab. Denison Univ. 18 pp. 217–218; *P. lenaensis*, BORISIAK 45; *P.*, TSCHERNYSCHEW 390; *P.*, COSSMANN 73; *P.* DAS-GUPTA 95.

Pteria viridozona sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 403.

†*Pterinea prostriata* sp. n. Palaeozoic U. S. A., RUEDEMANN N. Y. State Mus. Bull. 189 p. 74; *P.*, WILLIAMS & BREGER 424.

†*Pteronitella* with *P. quadrata* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 193–197.

Septifer bifurcatus var. n. *obsoletus* N. W. America, DALL U. S. Nation. Mus. Proc. 52 p. 404.

Vulsella pacifica sp. n. N. W. America, DALL U. S. Nation. Mus. Proc. 52 p. 403.

ARCACEA.

†*Acila gabbiana* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 481.

Arca tetragona, DE GREGORIO 145; *A. noe*, MONTEROSATO 265.

†*Arca* (*Scapharca*) *straminea*, Say subsp. n. *rubisiniana* Miocene Florida, MANSFIELD U. S. Nation. Mus. Proc. 51 p. 603; *A. clarki* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 481; *A. subprotracta*, DALL 83; *A.*, DAS-GUPTA 95

†*Cleidophorus* with *C. curtus*, *perovalis* spp. n. Silurian U. S. A., WILLIAMS & BERGER Bull. U. S. Geol. Surv. 89 pp. 159-161.

†*Ctenodonta? salinensis* sp. n. Palaeozoic U. S. A., RUEDEMANN N. Y. State Mus. Bull. 189 p. 75.

†*Beushausenia*, COSSMANN 73.

†*Barbatia (Calloarca) cuculoides*, DALL 83.

Glycymeris corteziana, *migueliana* spp. n. N. W. America, DALL U. S. Nation. Mus. Proc. 52 p. 402; *G. diaphorus* sp. n. Uruguay, DALL Nautilus 29 p. 112; *G. pectunculus*, *reevei*, *planatus* & *G. mindoroensis* sp. n. Philippines, SMITH Proc. Malac. Soc. 12 p. 15, 18.

†*Glycymeris* with *G. cookei* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 490; *G. australis gigantea* var. n. Cainozoic S. Australia, CHAPMAN S. Australia Geol. Surv. Bull. 4 p. 19; *G. perrini*, *fresnoensis*, *hannibali* spp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 pp. 482-483.

Leda navispa, *amiata*, *oxia*, *liogona*, *ossa* var. *sculpta*, *L. gomphoidea*, *fiascona*, *phenaxia*, *spargana*, *hamata* var. *limata* varr. & spp. n. N.W. America, DALL U.S. Nation. Mus. Proc. 52 pp. 395-397; *L. oblonga*, HEDLEY 166; *L. pernula*, DERRIUGIN 100.

†*Leda choctawhatcheensis* sp. n. Miocene Florida, MANSFIELD U. S. Nation. Mus. Proc. 51 p. 604; *L. fresnoensis* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 483; *L.* with *L. harrisi*, *minuta* spp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 171-172; *L.*, COSSMANN 73; *L.*, MATHER 249; *L.*, WELLER 419.

Limopsis skenia, *akutanica* spp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 pp. 402-403; *L. grandis*, HEDLEY 166.

Lissarca beunetti sp. n. S. Shetland Isds., PRESTON Ann. Mag. Nat. Hist. 18 p. 271; *L.*, HEDLEY 166.

†*Macrodon*, FRAUENFELDER 121.

Malletia sabrina sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 18; *M. (Minormalletia) talawa*, *M. (Neilo) flora* spp. n. N.W.

America, DALL U. S. Nation. Mus. Proc. 52 p. 400.

†*Myophusia* with *M. chapmani* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 p. 162.

Nucula semiramisensis sp. n. Andaman Isds., PRESTON Rec. Ind. Mus. 12 p. 93; *N. cardara*, *darella*, *linki*, *quirica*, *petriola* spp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 pp. 394-395.

†*Nucula* with *N. kessleriana* sp. n. Carboniferous U. S. A., MATHER Bull. Sci. Lab. Denison Univ. 18 pp. 210-212; *N.*, WELLER 419.

†*Nuculoidea* gen. n. (*Nucula*) *N. (N.) bellatula*, *cordata*, *trigonale* spp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 173-177.

†*Paleoneilo* with *P. mainensis* var. n. *umbonata* Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 168-170.

†*Parallelodon? brevifulcratum* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 146; *P.* with *P. illinoensis* sp. n. Carboniferous U. S. A., WELLER Contrib. Walker Mus. Chicago 1 p. 249; *P.* with *P. pergibbosus*, *cancellus* spp. n. Carboniferous U. S. A., MATHER Bull. Sci. Lab. Denison Univ. 18 pp. 214-215; *P.* with *P. sarnaensis* sp. n., FREDERICKS Kazani Trd. Obsé jest. 47 pp. 21-23.

Philippiella bagei, *orbiculata* Antarctic; *hamiltoni* Macquarie Isd. spp. n., HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 pp. 20-21.

Philobrya wandelensis, HEDLEY 166.

Poroleda longicaudata, HEDLEY 166; *P.*, GATLIFF & GABRIEL 132.

†*Schizodus morrowensis* sp. n. Carboniferous U. S. A., MATHER Bull. Sci. Lab. Denison Univ. 18 p. 222; *S.* with *S. ? prunum* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 238-239.

†*Tellinites* with *T. chapmani*, *curta* spp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 163-167.

Tindaria californica, *brunnea*, *martiniana*, *ritteri*, *dicofania*, *cervola*, spp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 pp. 400-402.

†*Trigonia zonata*, Ag. *grewingki* var. n. Jurassic Russia, KRENKEL Palaeont. Stuttgart 61 pp. 191–362; *T. ferdinandi* sp. n. Cretaceous Asia Minor, FRECH Zs. D. Geol. Ges. 68 p. 271.

Yoldia oleacina, *secunda*, *beringiana*, *orca*, *sanesia*, *cecinnella*, *capsa* spp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 pp. 398–400.

†*Yoldia*, WELLER 419.

SUBMYTILACEA.

Anodonta cellensis, FERNAU 114; *A. c.*, LINDHOLM 231; *A. c.*, WETEKAMP 423; *A. danielsi*, ELLIS 112; *A.*, BRÜCK 49.

Anodontites dalli, *bartschi* spp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 667–668.

†*Anodontopsis* with *A. maccoyiana* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 236–238.

Astarte, DERJUGIN 100.

†*Astarte* with *A. vendaeensis*, *latefulcrata*, *platymorpha* spp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 pp. 150–153; *A. (Ashtarotha) vaughani* sp. n. Miocene Florida, MANSFIELD U. S. Nation. Mus. Proc. 51 p. 605.

†*Bakewellia ceratophaga*, TSCHERNYSHEW 390.

Cardita, LAMY 222 and 225.

†*Cardita* with *C. beaumonti* var. n. *cilicica*, *C. mavrogordati* sp. n. Cretaceous Asia Minor FRECH Zs. D. Geol. Ges. 68 pp. 283–285; *C. (Carditamera) shepardi*, DALL 83.

Cokeria southalli gen. & sp. n. [Unionidae] S. Dakota, MARSHALL Nautilus 29 p. 133.

†*Crassatellites paramesus* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 495; *C. hillisi* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 482.

†*Cypricardella* with *C. bellatula*, *rotundata*, *transversa* spp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 239–249; *C.* with *C. laevis* sp. n. Carboniferous U. S. A., WELLER Contrib. Walker Mus. Chicago 1 p. 252.

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†*Cypricerdites* with *C. detroitensis* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 147–156.

†*Cyrtodonta*, FOERSTE 119.

Diplodon kelseyi, *obsolescens* spp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 pp. 665–666.

Eurynia (Micromya), *E. (Eurynia)*, *Lampsilis*, ORTMANN 287.

Gonidea angulata, ORTMANN 288.

†*Goniophora* with *G. kayseri*, *omega* spp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 223–233.

Hyria jamauchimensis sp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 p. 664.

Hyriopsis myersiana, ORTMANN 290.

Lampsilis with *L. radiata oneidensis* var. n. N.E. United States, BAKER Nautilus 30 p. 74.

Lemiox rimosus, ORTMANN 289.

Margaritana auricularia, HAAS 154.

Milneria kelseyi sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 408.

Miodontiscus meridionalis sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 408.

†*Modiolopsis* sp. n. Ordovician U. S. A. RAYMOND Ann. Carnegie Mus. 10 p. 339.

†*Modiomorpha* with *M. aroostooki*, *chapmani* spp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 216–223.

Mutela, GERMAIN 137.

†*Myoconcha*, FRAUENFELDER 121.

†*Opis*, COSSMANN 73.

Pleurobema simpsoni nom. n. for *Unio striatus*, Lea, *P. conradi* nom. n. for *U. maculatus* Contr., VANATTA Philadelphia Proc. Acad. Sci. 67 p. 559; *P. lewisii*, WALKER 410.

†*Pleurophorus*, MATHER 249.

Pseudanodonta elongata, HARGREAVES & FIRTH 160.

Pseudokellya stillwelli sp. n. Arctic, HEDLEY Aust. Ant. Exp. 1911–1914 Vol. 4 p. 31.

Ptychocardia with *P. rudis* sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914, Vol. 4 pp. 30-31.

†*Scalenaria bielzi*, GRIGOROVİČ-BEREZOVSKIJ 147.

†*Schizodus wheeleri*, TSCHERNYSCHEW 890; S., WELLER 419.

Silicula rouchi, HEDLEY 166.

†*Sphenotomorpha* gen. n. with *S. rigidula* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 233-236.

†*Trigonodus*, MUŠKETOV 268.

Unio complanatus mainensis var. n. Maine, RICH Science New York 42 pp. 579-580; *U.* with *U. rafinesquei* nom. n. for *U. fuscatus*, Lea, VANATTA Philadelphia Proc. Acad. Sci. 67 p. 559; *U. cor.* FRIERSON 125; *U. giganteus*, FRIERSON 124; *U.*, BRÜCK 49; *U.*, GERMAIN 137; *U.*, GRIGOROVİČ-BEREZOVSKIJ 147; *U.*, WALKER 409.

Unionidae, UTTERBACK 391.

Venericardia astartoides, HEDLEY 166.

†*Venericardia ? tenuicostulata* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 149; *V. praecisa*, DALL 83; V., LAMY 225.

ERYCINACEA.

Cyamium rotundatum, HEDLEY 166.

Entovalva (Synapticola) perrieri, MAILLARD, ANTHONY, 14.

Erycina catalinae, E. ? *coronata*, E. *bakeri*, *balliana*, *chacei sontarosae* spp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 pp. 409-410.

Kellia nimrodiana, HEDLEY 166.

Lasaea consanguinea, HEDLEY 166.

Lepton frenchiensis sp. n. Victoria, GATLIF & GABRIEL Proc. R. Soc. Victoria 29 p. 105.

Psephidia brunnea sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 413.

Pseudopythina myaciformis sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 412.

Rochefortia ferruginosa, *beringensis*, *grebnitzskii*, *golischii*, spp. n., N.W. America, DALL, U. S. Nation. Mus. Proc. 52 p. 411; *R.* with *R. macquari-*

ensis sp. n. Macquarie Isd., HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 32.

Tellimya flavida sp. n. S. Shetland Isds., PRESTON Ann. Mag. Nat. Hist. 18 p. 272.

CARDIACEA.

†*Adacna*, KALICKIJ 207.

Cardium dulcinea sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 412; *C. fultoni* sp. n. Philippines. SOWERBY Proc. Malac. Soc. 12 p. 76.

†*Cardium marysvillensis* nom. n. for *C. dalli*, DICKERSON Univ. Cal. Pub. Geol. 9 p. 482; *C. (Jurassicardium) microscopicum* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 156; C., DALL 83; C. KALICKIJ 207.

†*Conocardium dubia* sp. n. Silurian U.S.A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 201-202; *C. mesialis* sp. n. Carboniferous U.S.A. Contrib., WALKER Mus. Chicago 1 p. 249; *C. kolvae*, *praepermicus*, spp. n., Ural Upper Carboniferous, FREDERICKS Kazan Trd. Obsč. jest. 47 pp. 18-19; C., TSCHERNYSCHEW 390.

†*Didacna parvula* sp. n. *catillus*, *planissima*, *anomalodonta* varr. n., *rudis* sp. n. varr. *varia*, *catillus-rudis* varr. n. Berg der Bakustufe, NALIVKIN Mém. Com. géol. 116 pp. 6-14 27-29; *D. paetrigonoides*, *post-carditoides*, spp. n., Pliocene Russia, NALIVKIN & ANISIMOV Mém. Com. géol. 270 pp. 1-22; *D. trigonoides*, *carditoides*, *crassa*, KALICKIJ 207.

†*Monodacna sjögreni*, KALICKIJ 207.

Protocardia paziana sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 412.

†*Pseudotrapezium*, COSSMANN 73.

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Anisodonta ? pellucida sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 411.

Antigona (Circumphalus) foliacea & A. (*Ventricola*) *mindoroensis* sp. n. Philippines, SMITH Proc. Malac. Soc. 12 pp. 14 17.

†*Antigona*, DALL 83.

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Callista roseotincta, SMITH 351.

Callocardia (Agriodesma) felipponei sp. n. Uruguay, DALL Nautilus 29 p. 113.

Chione mawsoni sp. n. Macquarie Isd., HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 33.

†*Chione bainbridgensis* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 499.

†*Cimitaria* with *C. ? chapmani* sp. n. Silurian U.S.A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 253-257.

†*Coralliophaga ? boonei* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 155.

Corbicula cochinchensis sp. n. Cochinchina backwater Ernakulam India, PRESTON Rec. Ind. Mus. 12 pp. 36-37; *C. fluminalis* var. *oxiana*, LINDHOLM 231; *C. Germain* 137.

Cypricardia, LAMY, 223.

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†*Cyprina scutellaria*, GORIZDRO 141.

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Dosinia subalata sp. n. Philippines, SMITH Proc. Malac. Soc. 12 p. 17.

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†*Grammysia*, WILLIAMS & BREGER. 424.

Isocardia, LAMY 223.

†*Macrocallista*, DALL 83.

†*Marcia (?) conradi* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 484.

†*Megalodon*, DAS-GUPTA 95.

Musculium with *M. transversum* *decisum* form. n., *M. partumeivum globosum*, *truncatum albidum* & *angustum*, *rosaceum fuliginosum*, *sphaericum succineum* varr. n. *M. australe* sp. n. U.S.A., STERKI Ann. Carnegie Mus. 10 pp. 439-446.

†*Orthodesma* with *O. carinifera* sp. n. Silurian U.S.A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 p. 126.

†*Paleosolen* with *P. chapmani* sp. n. Silurian U.S.A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 249-253.

Paphia microdon, SMITH 351.

Petricola digitale sp. n. Philippines SMITH Proc. Malac. Soc. 12 p. 16; *P. lithophaga*, DE GREGORIO 145.

†*Physetomya*, WILLIAMS & BREGER 424.

Pisidium with *P. compressum curvatum*, *pellucidum illinoisense* varr. n. *P. hinkleyi* sp. n. U.S.A.; *P. latchfordi* sp. n. Canada; *P. trapezoideum protensum*, *neglectum corpulentum*, *politum decorum*, *abditum ? lacteum* varr. n. U.S.A.; *P. subrotundum canadense* var. n. Canada; *P. s. olofi* & *pumilum* varr. n. U.S.A.; *P. vexum* sp. n. Canada; *P. splendidulum corneolum*, *novangliae* & *miliastrum*, *P. contortum (?) triangulare*, *P. pauperculum crystalense* & *sulphureum* varr. n. *P. ovum* sp. n. *P. vesiculare striatellum*, *medianum clarum* varr. n. *P. fabale*, *abortivum* & a. var. *exiguum*, spp. & var. n., U.S.A.; *P. guatemalense* sp. n. Guatemala STERKI Ann. Carnegie Mus. 10 pp. 446-474; *Pisidium hannai* sp. n. Alaska, STERKI U. S. Nation. Mus. Proc. 51 pp. 476-477; *P. liljeborgi*, OLDHAM 281; *P. casertanum f. lacustris*, PRESTON 315; *P. supinum*, *parvulum*, WOODWARD 428; *P. SCHLESCH* 338.

†*Pisidium amnicum*, GRIGOROVICH-BEREZOVSKIJ 147; *P. supinum*, *parvulum*, PHILLIPS 299.

†*Pitaria* with *P. (Lamelliconcha) silicifluya* sp. n. Oligocene Georgia DALL U. S. Nation. Mus. Proc. 51 pp. 500-501.

Protothaca staminca var. n. *spatiosa* N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 413.

Psammobia philippinensis sp. n. Philippines, SMITH Proc. Malac. Soc. 12 p. 15.

†*Psemmobia cerasia* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 501; *P. gubernatoria*, Glenn. var. n. *dalli* Miocene U.S.A., OLSSON Bull. Amer. Pal. 27 p. 25.

Saxidomus gigonteus var. n. *brevis* N.W. America, DALL U.S. Nation. Mus. Proc. 52 p. 413.

Sphaerium with *S. sulcatum* varr. *albescens*, *insigne*, *planatum*; *S. stramineum* var. *wisconsinense* varr. n. U.S.A.; *S. torsum* sp. n. Canada; *S. striatinum* var. *corpulentum* var. n. U.S.A. STERKI Ann. Carnegie Mus. 10 pp. 431-439.

†*Tivela packardii* sp. n. Eocene California, DICKERSON Univ. Cal. Pub.

Geol. 9 p. 486; *T. trigonalis* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 207.

Thyasira cygnus, tricarinata, spp. n., N.W. America, DALL, U. S. Nation. Mus. Proc. 52 p. 409.

Trigonicardia eudoxia sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 412.

Velorita delicatula sp. n. Cochin back-water near Ernakulam India, PRESTON Rec. Ind. Mus. 12 p. 37.

Venus mercenaria, MEIGS 253.

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Corbula porcella, kelseyi, spp. n., N.W. America, DALL U. S. Nation. Mus. Proc. 52 pp. 415-416.

†*Corbula middlemissi* sp. n. Cretaceous Hazara, DAS-GUPTA J. As. Soc. Bengal 11 p. 255.

Ervilia californica sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 414.

Hiatella, LAMY 223.

Lutraria magna, DE GRERORIO 145.

†*Macra beali* sp. n. Miocene California, HALL & AMBROSE Nautilus 30 p. 80; *M. mississippiensis*, DALL 83; M. WAGNER 408.

Mactrella elisia, DALL 88.

†*Mesodesma pacifica* sp. n. Miocene California, HALL & AMBROSE Nautilus 30 p. 79.

Panomya arctica var. n. *turgida*, *P. beringiana* sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 416.

†*Panopea smithii* sp. n. Eocene California, HALL & AMBROSE Nautilus 30 p. 79.

Saxicava antarctica, HEDLEY 166.

Saxicavella pacifica sp. n. N.W. America, DALL, U. S. Nation. Mus. Proc. 52 p. 416.

Sphenia trunculus, pholadidea, spp. n., N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 415.

†*Spisula merriami* sp. n. Eocene California, DICKERSON Univ. Cal. Geol. 9 p. 488.

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Phaladidea sagitta sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 417.

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Teredo diegensis sp. n. California, BARTSCH Nautilus 30 p. 48.—*T. navalis*, KUELMANN 218a.

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†*Diplodonta waltonensis* sp. n. Miocene Florida MANSFIELD U. S. Nation. Mus. Proc. 51 p. 606.

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†*Gouodon*, FRAUENFELDER 121.

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Lucina euglypta, transversa, spp. n., Philippines, SMITH Proc. Malac. Soc. 12 p. 18; *L. LAMY* 221 & 224.

†*Lucina packi, diegoensis*, spp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 484; *L.*, LAMY 221.

†*Paracyclus* with *P. bulloides* sp. n. Silurian U.S.A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 257-259.

Phacoides, LAMY 224.

†*Phacoides* with *P. perovatus* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 pp. 496-498; *P. (Myrtea) taffana* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 485; *P. (Pleurolocina) shocta-whatcheensis* sp. n. Miocene Florida MANSFIELD U. S. Nation. Mus. Proc. 51 p. 604.

TELLINACEA.

Leptomya perconfusa, HEDLEY 166.

Macoma with *M. brota* nom. nov. for *Tellina edentula* Brød & Sow *M. brota*, var. n. *lipara*, *M. inquinata* var. n. *arnheimi*, *M. quadrana, truncaria*, spp. n., N.W. America, DALL U. S. Nation Mus. Proc. 52 pp. 413-414.

†*Macoma wilcoxi*, HALL & AMBROSE 158.

†? *Semele*, DALL 83.

Tellina with *T. bertiniana, innocens, persimplex, pervitrea, phoenicensis, soror, unguis, vadorum*, spp. n., Andaman Isds., PRESTON Rec. Ind. Mus. 12 pp. 95-99; *T. ennurensis, brunneo-flavida*, spp. n.,

Madras, PRESTON Rec. Ind. Mus. 12 p. 38.

†*Tellina jollaensis* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 487; *T.* DALL 83.

Theora hindsiana sp. n. Andaman Isds., PRESTON Rec. Ind. Mus. 12 p. 99; *T.* with *T. translucens* sp. n. Madras, PRESTON Rec. Ind. Mus. 12 pp. 38–39.

ANATINACEA.

†*Arcomya*, COSSMANN 73; *A.* FRAUENFELDER 121.

Cardiomya balboae sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 407.—*C. andamanica* sp. n. Andaman Isds., PRESTON Rec. Ind. Mus. 12 p. 99.

Cetoconcha malespinae sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 407.

†*Clinopistha radiata*, TSCHERNY-SCHIEW 390.

Cuspidaria with *C. cochinesis* sp. n. Cochin backwater near Ernakulam India, PRESTON Rec. Ind. Mus. 12 p. 39.—*C. apodema* sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 407.—*C.* HEDLEY 166.

†*Edmondia fountainensis*, *genevievensis* spp. n., Carboniferous U.S.A., WELLER. Contrib. Walker Mus. Chicago 1 p. 247.—*E.* MATHER 249.

†*Elymella* with *E. harrisi* sp. n. Silurian U.S.A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 p. 140.

†*Grammysioidea* gen. n. (*Grammysia*) with *G. (G.) princiana*, *elymelloides*, spp. n., Silurian U.S.A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 133–138.

Laternula elliptica, HEDLEY 166.

Myodora elongata sp. n. Tasmania, MAY Proc. R. Soc. Tasmania 1915 p. 98.

Myonera tillamookensis sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 407.

Pholadomya adelaidis, *antarctica*, *mawsoni*, spp. n., Antarctic, HEDLEY Aust. Ant. Exp. 1911–1914 Vol. 4 p. 28.

†*Pholadomya harrigani* sp. n. Cretaceous California, HALL & AMBROSE NAUTILUS 30 p. 77.

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†*Pleuromya baltica* sp. n. Jurassic Russia, KRENKEL Palaeont. Stuttgart 61 pp. 191–362.—*P. subdonacina* sp. n. ? Jurassic ? Cretaceous Persia, FISCHER Wien Beitr. Pal. Geol. Öst.-Ung. 27 pp. 207–273.—*P.* COSSMANN 73; *P.* FRAUENFELDER 121.

†*Solenomya*, MATHER 249.

Thracia meridionalis, HEDLEY 166.

Verticordia tasmanica sp. n. Tasmania MAY Proc. R. Soc. Tasmania 1915 p. 99; *V.* GATLIFF & GABRIEL 132.

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†*Adelina voluta*, KALICKIJ 207.

†*Aligena pustulosa*, DALL var. n. *chop-tankensis* Miocene U.S.A. OLSSON Bull. Amer. Pal. 27 p. 25.

†*Apscheronia eurydesma*, *propinqua* KALICKIJ 207.

Calyptogena elongata sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 408.

†*Cypriocardinia laevicula* sp. n. Carboniferous U.S.A., MATHER Bull. Sci. Lab. Denison Univ. 18 p. 216.—*C.* WELLER 419.

Dermatomya buttoni, *beringiana*, *leonina*, spp. n., N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 406.

†*Glossites* with *G. barraudii*, *amni-genoides*, spp. n., Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 143–147.

†*Gonodus*, MUSKETOV, 268.

†*Pholadomorpha*, FOERSTE 119.

Pronucula mesembrina sp. n. Macquarie Isd., HEDLEY Aust. Ant. Exp. 1911–1914 Vol. 4 p. 17.

†*Sphenotus halensis* sp. n. Carboniferous U.S.A., MATHER Bull. Sci. Lab. Denison Univ. 18 p. 207.

†*Tarquemia*, FRAUENFELDER 121.

†*Unicardium*, COSSMANN 73.

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- † *Actinocamax*, SINCOV 348.
- † *Ammonites leptophyllus* KRASOVSKIJ 217.
- † *Ammonitoceras tovilense* sp. n. Cretaceous England, CRICK Proc. Malac. Soc. 12 pp. 118-120.
- † *Ammonoidea*, ROLLIER 331.
- † *Anolites kitakamicus* sp. n. Trias Japan, DIENER Denkschr. K. Ak. Wiss., Wien 92 p. 17.
- † *Arietites bucklandi novosus* var. n. Lias Deutschland p. 6, *ceratitoides hercynica* var. n. Lias Deutschland p. 35, SCHMIDT Palaeontographica Stuttgart 61.
- X † *Aulacobelus* gen. n. *Belemnitidarum*, PAVLOV Mém. Ac. sc. 21 No. 4 p. 6.
- † *Baculites*, GRECO 143.—B., KAZANSKIJ 210.
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- † *Belemnitidae*, PAVLOV 295.
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- † *Cellites*, FRAUENFELDER 121.
- † *Ceratites kittli* sp. n. Trias West-bosnien, TOULA Wien Jahrb. Geol.
- RehsAnst. 63 pp. 621-694.—C. FRAUENFELDER 121.
- † *Cheiloceras subpartitum cuspidatu* var. n. *lagoviense rotundolobata* var. n. *lulilobum* sp. n. Oberer Neodevon des Ural, PERNA Mém. Com. géol. 99 pp. 51-57.
- Chiroteuthis portieri* sp. n. N. Atlantic JOUBIN Bull. Inst. Ocean. Monaco No. 317 1916 p. 1-10.
- † *Chunioteuthis* gen. n. *C. ebersbachii* sp. n. Sargasso Sea, GRIMPE Zool. Anz. 46 pp. 349-359.
- † *Clymenia* with *C. involuta* var. *frechi*, *subflexuosa* varr. *costata* and *acuta*, *flexuosa orientalis*, *annulata* varr. *correcta*, *rustica*, *C. pinnata*, *placida*, *karpinskii*, spp. & varr. n., Devonian Russia, PERNA Mém. Com. Geol. 99 pp. 57-81.
- † *Ceoloceras davcei rectiradiatum* var. n. Jurassic England, WINGRAVE Geol. Mag. (n.s.) London 3 p. 196.
- † *Colpoceras*, FOERSTE 119.
- † *Cosmoceras guilhelmi baltica*, *proniacundanci* varr. n., *C. gravesense* sp. n. *C. aculeatum* var. n. *balticum*, *C. reuteri*, *toruquis*, spp. n., Jurassic Russia, KRENKEL Palaeont. Stuttgart 61 pp. 191-362.—C., DOUVILLÉ 106.
- † *Crioceras* with *C. caucasicum* sp. n. Cretaceous Daghestan, KAZANSKIJ Tomsk. Izv. technol. Inst. 32 No. 4 pp. 38-47.—*C. ramososeptatum*, SINCOV 349.
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- † *Desmoceras sallense* sp. n. Kreide des Daghestan, KAZANSKIJ Tomsk Izv. technol. Inst. 32 No. 4 pp. 110-111; D. DOUVILLÉ 107.
- † *Dimercoceras mammiliferum*, PERNA 298.
- † *Dinarites*, FRAUENFELDER 121.
- † *Discosphinctes* subgen. n. *D. DACQUÉ* Wien. Beitr. Pal. Ost.-Ung. 27 pp. 1-27.
- † *Douvilleiceras* with *D.* varr. *lati-spinosa*, *pygmaea* varr. n., *seminodosum* varr. *naltshkensis*, *uralica* varr. n., Aptien du Caucase, NIKSIĆ Mém. Com. géol. 121 pp. 3-47, 50-53; *D.* with *D. stuckenbergi*, *pusillum*, *intermedium*,

spp. n., Cretaceous Dahgestan, KAZANSKIJ Tomsk. Izv. technol. Inst. 32 No. 4 pp. 51-66.

†*Ephippioceras mosquensis* sp. n. Lower Carboniferous Central Russia, FREDERICKS Kazani Trd. Obsč. jest. 47 pp. 24-25.

†*Euleteuthis* gen. n. (for *Symplectoteuthis laminosa* Sasaki 1915), BERRY Philadelphia Proc. Acad. Nat. Sci. 68 pp. 48 60.

†*Euryptychites*, PAVLOV 295.

†*Gastrioceras* with *G. kesslerense*, pygmaeum, spp. n., Carboniferous U. S. A., MATHER Bull. Sci. Lab. Denison Univ. 18 pp. 242-244.

†*Glyphioceras vesiculiferum* de Koninck, CRICK 76.

†*Gomphoceras osculum* sp. n. Palaeozoic U.S.A., RUEDEMANN N.Y. State Mus. Bull. 189 p. 76.—*G. densiseptatum* sp. n. Oberdevon Brunn., OPPENHEIMER Verh. nat. f. Ver. Brunn. 54 p. 172.

Goniatites, PERNA 297; *G. SOBOLEV* 354.

†*Gymnites peciensis* sp. n. Trias Westbosnien, TOULA Wien Jahrb. Geol. RehsAnst. 63 pp. 621-694.

†*Hectioceras krakoviense popilanica* var. n. Jurassic Russia, KRENKEL Palaeont. Stuttgart 61 pp. 191-362.

Hemisepius, SMITH 352.

†*Hexameroceras microstoma* sp. n. Palaeozoic U.S.A., RUEDEMANN N.Y. State Mus. Bull. 189 p. 79.

†*Hollandites nodai* sp. n. Trias Japan, DIENER Denkschr. K. Ak. Wiss. Wien 92 12.

†*Hoplites* with *H. lavaschensis*, subfurcatus, spp. n., Cretaceous Daghestan, KAZANSKIJ Tomsk. Izv. technol. Inst. 32 pp. 98-108.—*H. LIÖKOV* 229; *H. SINZOW* 350.

†*Hungarites*, FRAUENFELDER 121.

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†*Idioteuthis* gen. n. *I. lattipinna* sp. n. Japan, SASAKI Annot. Zool. Jap. 9 p. 108.

†*Idoceras rufanum*, *montejuntense*, spp. n., Jura Abyssinia, DACQUÉ Wien Beitr. Pal. Geol. Öst.-Ung. 27 pp. 1-17.

Lampadioteuthidae fam. n., BERRY Philadelphia Proc. Acad. Nat. Sci. 68 pp. 48 51.

†*Lampadioteuthis megaleia* gen. & sp. n. Kermadec Isds., BERRY Philadelphia Proc. Acad. Nat. Sci. 68 pp. 48 52.

†*Macrocephalites ischmae* var. *arctica*, PAVLOV 295.

†*Megabelus* gen. n. *Belemnitidarum*, PAVLOV Mém. Ac. sc. 21 No. 4 pp. 5-6.

Megalocranchia pardus sp. n. Kermadec Isds., BERRY Philadelphia Proc. Acad. Nat. Sci. 68 pp. 48 61.

Moschites challengerii nom. nov. for *Eledona verrucosa*, Hoyle 1886 pars, non Verrill 1881, BERRY Philadelphia Proc. Acad. Nat. Sci. 68 pp. 48 49.

†*Nautilus hazarensis* sp. n. Tertiary Hazara, DAS-GUPTA J. As. Soc. Bengal 11 p. 256.—*N. secernendus*, *adneticus*, *arariformis*, *egregius*, *anomphalus*, *quadrangularis*, *pseudorugosus*, spp. n., Lias, PIA Wien Beitr. Pal. Geol. Öst.-Ung. 27 pp. 19-86; *N. Rhyncolithes butleri* sp. n. Jurassic England, CRICK Geol. Mag. (n.s.) London 33 pp. 260-264; *N. FRAUENFELDER* 121.

†*Nautilus ammoni* nom. n. for *N. franconicus* v. Amm. non. Opp. aff. *ammoni* nom. n. for *N. franconiensis* Neumayr, Herbich nom. Opp., *Schlotheimi* = *aganiticus* Schlotheim pars. ? Foord u. Crick, *mjatschkowanus* = *intermedius* Trautsch non. Sow.; †*N. Klebelsbergi* nom. n. = *Picteti* Opp. Zitt. pars., LOESCH Palaeontographica Stuttgart 61 pp. 83 100 106 124 127.

†*Nautilus Schneidi* Bayern, Rogeri, Krakau, Roemeri, Krakau, Brunhuberi, Ammoni, Schwertschlageri, Franken, Argoviensis, Bodeni, helveticus, Rollieri turingensis, Schlosseri, Stromeri, Klebelsbergi, allen weisher Jura, spp. n., LOESCH, Palaeontographica Stuttgart 61, pp. 76 78 79 81 83 93 94 103 111 114 124 137.

†*Naunobelus* gen. n. *Belemnitidarum*, PAVLOV Mém. Ac. sc. 21 No. 4 p. 6.

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†*Oecotraustes*, STREMOUCHOV 371.

Onychoteuthis banksi, MASSY 246.

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†*Parahoplites*, KAZANSKIJ 210.

†*Peltocheras lithuanicum* sp. n. Jurassic Russia, KRENKEL Palaeont. Stuttgart 61 pp. 191-362.

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†*Prolobites delphinus* with *P. d. nana* var. n. Oberer Neodevon des Ural. PERNA Mém. Com. géol. 99 pp. 25-27.

†*Proplanulites dacquei* sp. n. Jurassic Russia, KRENKEL Palaeont. Stuttgart 61 pp. 191-362.

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†*Ptychites reticulatus*, *shakici*, spp. n.,

Trias Westbosnien, TOULA Wien Jahrb. Geol. Reichsanst. 63 pp. 621-694; *P.* FRAUENFELDER 121.

†*Ptychites Inaicus* sp. n. Trias Japan, DIENER Denkschr. K. Ak. Wiss. Wien 92 p. 20.

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(GENERAL)

ARRANGED BY

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Talitrus sylvaticus p. 83 figs., CHILTON J. R. Soc. N. S. Wales 50.

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Triodos gen. n., *insignis* sp. n. S. Africa p. 140 figs., BARNARD Ann. S. Afric. Mus. 15.

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XI. ARACHNIDA

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PANTOPODA, TARDIGRADA, PENTASTOMIDA, MYRIOPODA
and PROTOTRACHEATA

ARRANGED BY

W. T. CALMAN, D.Sc.

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[Deriugin, K. M.] Дерюгинъ, К. М. Фауна Кольскаго залива въ условіяхъ ея существованія. [La faune du golfe de Kola et les conditions de son existence.] Petrograd Mém. Ac. sc. (Ser. 8) 34 N°. 1 1915 (I-IX+1-929) 14 planches 14 cartes et 55 figs. 3

Hilton, W. A. A remarkable Pycnogonid. J. Ent. Zool. Claremont Calif. 8 1916 (19-24) 2 pls. 4

Hilton, W. A. The life history of *Anoplodactylus erectus* Cole. J. Ent. Zool. Claremont Calif. 8 1916 (25-34) 3 pls. 5

Lebour, Marie V. Notes on the life history of *Anaphia petiolata* (Kröyer). Plymouth J. Mar. Biol. Ass. 11 1916 (51-56) figs. 6

Loman, J. C. C. *Pallenopsis* and *Rigona*, with description of a new species. Leiden Zool. Med. 2 1916 (15-26) figs. 7

Stephensen, K. Zoogeographical investigation of certain fjords in Southern Greenland with special reference to Crustacea, Pycnogonida, and Echinodermata, including a list of Alcyonaria and Pisces. København Medd. Grønland, 53 1916 (231-378) figs. 8

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Schmetterlinge als Nachweiszeitliche Relikte, Linstow 984.

Lep. found on a trip round the world; Whittle 1768.

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Neu Pommern. *Coleoptera*, Aurivillius 55.—*Orthoptera*, Ebner 476.

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(c) North Europe and Siberia.

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(d) British Islands.

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wards & Williams 485.—*Perrisia peri-
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schild p. 279 Ent. Mag. 52.

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98.

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Scott. Natural. 1916.

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p. 299 Scott. Natural. 1916.

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New Forest South p. 233 Entomol.
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p. 256 Ent. Rec. 28; Penarth Hallett
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52; Weybridge Mitford p. 261 Ent.
Mag. 52.

Oxon; Britten Ent. Mag. 52 p. 185,
also p. 186, Collins p. 205 T.c., Walker
p. 204 T.c. and Cothill, p. 16 T.c.

†Leicester, Trias, Horwood 792.

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Nat. 9, Cheshire, Hardy p. 81 T.c.

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Naturalist 1916, Walsh p. 231 Ent.
Mag. 52; Barnsley Lept. *sanguinolenta*,
Bayford p. 205 T.c.

Durham, Walsh p. 90 Ent. Mag. 52.

Cumberland Day pp. 107–110 Natura-
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52.

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Roxburgh Black p. 186 Ent. Mag.
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Forfar Munro p. 93 Scott. Natural.
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Forth Hamilton, Evans p. 138 &
Evans p. 71, Scott. Natural. 1916.
East Lothian Evans p. 288 T.c.; Mid-
lothian Munro p. 95 T.c.; Edinbro,
Bem. 5-striatum Beare Ent. Mag. 52
p. 16; Edinburgh Munro p. 266 Scott.
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pp. 258–260.

Orkney Evans Scott. Natural. 1916 pp. 21 & 22.

Ireland, Wyse p. cxvii Pr. ent. Soc. London 1915; Glengariff Johnson p. 65 Irish Nat. 25; Wicklow Bonaparte-Wyse p. 16 T.c.; Waterford Bonaparte-Wyse p. 63 T.c.

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Penarth Hallett p. 261 Ent. Mag. 52; Porthcawl Hallett p. 221 Ent. Rec. 28.

Thornton heath Thurnall p. 90 Entomol. 49.

Reigate *Vespa norvegica* Chapman p. 187 Ent. Mag. 52.

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Yorkshire Sanderson Naturalist 1916 p. 346 fig. (*Polynema*).

Forth Evans p. 88 Scott. Natural. 1916.

Nairn Taylor p. 48 Scott. Natural. 1916.

Armagh and Donegal, Johnson 844, and T.c. p. 61.

Lepidoptera.

Devon and Dorset Ashby p. 38 Ent. Rec. 28; Torquay Walker & Lupton J. Torquay Soc. 2 1915 pp. 25-28; Sich p. 207 Ent. Rec. 28.

New Forest South p. 190 Entomol. 49; Bournemouth Tatchell p. 214 Entomol. 49.

Chichester Anderson p. 67 Entomol. 49; Eastbourne Adkin P.S. London ent. Soc. 1915-16 p. 62.

Salisbury Corbet p. 236 Entomol. 49; Fovant Ashby pp. 264-270 Ent. Rec. 28.

London Sich p. 32 etc. Ent. Rec. 28; Chiswick Sich 1498; Wanstead Thurnall p. 208 & p. 211 Entomol. 49.

Limpsfield Sheldon p. 89 Entomol. 49.

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Liverpool Mansbridge p. 70 Lancash. Nat. 9.

Lancashire and Cheshire, Proc. L. and C. ent. Soc. 39 pp. 1-11 sep. pag.

Durham Robson p. 163 & p. 104 Entomol. 49.

Scotland, Cockayne p. xcvi Pr. ent. Soc. London 1915; Macdonald p. 309 Scott. Natural. 1916; Scotland borders Bolam p. 286 T.c.; Forth Evans p. 47 & p. 309 T.c.; Edinburgh Evans p. 241 T.c.; Midlothian Evans p. 266 T.c.—

Aberdeen Hartley p. 22 Entomol. 49. Hebrides Sheldon etc. p. 42 Ent. Rec. 28.

Ireland *Anosia*, Frohawk p. 285 Entomol. 49; Roscommon Greer p. 82 Irish Nat. 25; Tyrone Greer 690; Killarney Bonaparte-Wyse Irish Nat. 25 p. 73.

Trichoptera.

Shetland Evans Scott. Natural. 1916 p. 72.

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Derbyshire Drabble & Drabble pp. 273-275 Entomol. 49.

Northumberland Cecid. galls, Bagnall Ent. Rec. 28 p. 158.

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Hemiptera.

New Forest *Notochilus*, Walker p. 186 Ent. Mag. 52.

Camberley Green p. 207 Ent. Mag. 52.

Oxon Britten p. 142 & p. 261 Ent. Mag. 52.

Baslow Derbysh. Carr Naturalist 1916 pp. 287-289.

Lancash. Dunlop pp. 115 & 116 Lancash. Nat. 9, Roberts p. 38 T.c.

Grange-over-Sands **Bagnall** Lancash. Nat. 8 pp. 387–390.

Durham and Yorkshire Coccidae, **Harrison** pp. 172–174 Entomol. 49.

Cumberland; **Britten** p. 278 Ent. Mag. 52, **Murray** p. 66 T.c., **Murray** p. 349 Naturalist 1916.

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Forth Evans p. 120 Scott. Natural. 1916.

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(e) Central and Eastern Europe.

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Russia. **Jacobson** 826; **Jakubovskij** 829; **Plaviliškov** 1281; **Sopociko** 1527; **Zaitzev** 1810.

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Germany. **Martin** 1052; **Osthelder** 1215; **Pfützner** 1253; **Wernecke** 1726.

Austria. **Hoffmann** 775; **Thurner** 1602; **Pfützner** 1254.

Russia: **Hiltebrandt** 772; **Sopociko** 1526; **Tušin** & **Rajevskij** 1666.

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Denmark: **Esben-Petersen** 508.

Germany: **Ulmer** 1671.

Neuroptera.

Holland: **MacGillavry** 1026.

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Kieffer 888; †**Meunier** 1084; **Oldenberg** 1201, 1202.

Holland: **Meyere** 1063; **Schmitz** 1458.

Lundbeck Denmark 1007.

Russia: **Stackelberg** 1530.

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†**Enderlein** 498.

Jensen-Haarup Denmark 831.

Russia: **Kirišenko** 893; **Kolosov** 913, 914, 915.

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Orthoptera.

Russia: **Uvarov** 1676.

Aptera.

Denmark; **Bartholin** 110.

(f) France.

Insecta, collectively.

Cotte 363; †**Meunier** 1085; **Pionneau** Auvergne, Echange 32 p. 18–20; **Tomlin** Ent. Mag. 52 p. 140.

Coleoptera.

Bondroit 184; **Caillol** 256; **Champion** p. lvii Pr. ent. Soc. London 1916; **Hustache**, p. 292 Bull. Soc. ent. France 1915; **Lavagne** 955; **Mequignon** 1074, 1075; **Normand** 1182.

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Cotte 362; Duchaussoy 460.

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Gouin 677; Rondou 1382; Rowland-Brown 1402; Maine-et-Loire, Abot Bull. Soc. Angers 45 pp. 72 & 73 and 46 pp. 55 & 56.—Var, Lowe 8-11 Entomol. 49.—Lucas Montpellier, p. 98 Bull. Soc. ent. France 1916.

Neuroptera.

Lacroix 939.

Diptera.

Legendre 964.

Plecoptera.

Navás 1157.

Paraneuroptera.

Gelin 622.

(g) South Europe and Mediterranean Basin.

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Andres Malta 43; Burr 248; Cozzi Italy 366; Navás Spain 1158; Tavares Spain 1586.

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Hymenoptera.

Mercet Spain 1076, 1077, 1078, 1079, 1081; Dusmet Arragon 468; Emery Italy 496; Masi Italy 1055; Silvestri Italy 1502; Krausse Sardinia 921; Mayer Süddalmatiens 1062; Morice N. Africa 1113; Morice Algeria 1114.

Lepidoptera.

Kheil Spain 879; Menés Spain 1072; Verity Italy 1698, 1700; Stauder Calabria 1532; Galvagni Süddalmatiens 619; Ragusa Sicily 1312; Buxton Dardanellas pp. 213-217 Ent. Rec. 28; Prout Cyprus 1299; Oberthür Algeria 1191; Hertz Algeria 1539; Chrétien Algeria 309; Hoggart mts. Algeria Rothschild 1290; Warren Egypt 1728.

Trichoptera.

Navás Spain 1154, 1156.

Neuroptera.

Navás Spain 1148; Salonica, Lucas p. 248 Entomol. 49.

Diptera.

Tavares Portugal 1587; Corti Italy 358; Zerny Süddalmatiens 1818; Anfreville Maroc 45; Carter Egypt 267.

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Paoli Sardinia Coccidae 1219; Raab und Werner Süddalmatiens 1305; Malenotti Egypt Coccidae 1034.

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Bagnall Spain 73.

Plecoptera.

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Paraneuroptera.

le Roi Sahara 975.

Orthoptera.

Ebner Abruzzi 477; Werner Süddalmatiens 1754; Bolívar Mogador 177.

(h) Caucasus, West & Central Asia.

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Bogoliulov 175; Karaviev 866; Rouzskij 1411; Vasiljev 1691; Wheeler & Mann Palestine 1764b.

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Avinoff Tibet 62; Filipiev Steppes des Kirghises Transouraliennes 556; Hampson Arabia 711; Kusnezov 936; Meyrick 1087.

Trichoptera.

Persia: Martynov 1054.

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Wagner Caucasus 1720.

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Distant Aden 429 ; Mordvilko 1110.

Paraneuroptera.

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Stschelkanovtzev 1563 ; Uvarov 1875.

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Bourgoin 200 ; Champion 282, 283,
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414 ; Grouvelle 695, 697, 698 ; Hus-
tache 809 ; Kolbe 912 ; Lesne 977 ;
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berger 1186, 1188, 1190 ; Orbigny 1203,
1204 ; Zimmermann 1820.*Hymenoptera*.Arnold 48a ; Bequaert 129, 130 ;
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485 ; Forel 572 ; Friese 582 ; Girault
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1121 ; Santschi 1427, 1428, 1429 ;
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1732, 1733, 1734.*Lepidoptera*.Aurivillius 54 ; Bethune-Baker 145 ;
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613 ; Hampson 710, 711 ; Joicey &
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1087 ; Neustetter 1168 ; Oberthür 1191 ;
Poulton 1289 ; Prout 1295, 1300 ;
Rothschild 1389, 1393 ; Rothschild &
Jordan 1394, 1395 ; Schultze 1468 ;
Swinhoe 1579.*Neuroptera*.

Esben-Petersen 507.

Diptera.Bezzi 149 ; Carter 267 ; Edwards
478, 479, 481 ; Johnston 845 ; Macfie &
Ingram 1024 ; Redhain et Bequaert
1363 ; Roubaud 1397 ; Schmitz 1457 ;
Speiser 1529 ; Townsend 1637 ; Ville-
neuve 1707, 1708, 1709, 1710, 1711,
1712, 1713, 1714, 1714a.*Hemiptera*.Bergroth 133 ; Cogan 351 ; Del
Guercio 406 ; Distant 427, 428, 429 ;
Green 683 ; Malenotti 1035 ; Poppius
1285 ; Theobald 1594, 1595 ; Zacher
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Hood 784, 785, 787.

Lipoptera.

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Paraneuroptera.

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Orthoptera.Carl 263 ; Ebner 476 ; Giglio-Tos
633 ; Peringuey 1239.Madagascar and Mascarene
Islands.*Coleoptera*.Achard 2, 3, 5, 7, 9 ; Alluaud 35, 36 ;
Aurivillius 55 ; Berlioz 138 ; Desbordes
411 ; Pic 1267 ; Pouillaude 1287, 1288.*Hymenoptera*.

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Meyrick 1087 ; Prout 1300 ; Roth-
schild 1393.*Hemiptera*.

Green Seychelles Coccidae 688.

Paraneuroptera.

Ris 1354.

Orthoptera.

Carl 263 ; Giglio-Tos 633.

Aptera.

Carpenter Seychelles 264.

Asia, Tropical and Eastern.

Including Japan, Biluchistan, Af-
ghanistan.*Insecta*, collectively.†Cockerell 326 ; Fletcher 563 ; Vitalis
1716.

Coleoptera.

Arrow Ceylon 50; Aurivillius 55; Bourgoin 197, 198; Champion 282, 283, 287, 288, 291; Fleischer Japan 562; Formánek 574, 575; Grouvelle 695; Hustache Japan 807; Jordan 856, 857; Lameere 949; Marshall India 1044, 1045; Maulik India 1059, 1060; Obenberger 1187; Peschet China 1245; Pic 1258, 1259, 1261, 1262, 1263, 1264, 1267, 1269, 1270; Reitter 1329.

Hymenoptera.

Aiyar India 16; Brues India 229; Cockerell Assam 329; Crawford India 373; Friese 583; Girault Japan 636, India 648, Ceylon 664; Grandi 681; Meade-Waldo India 1063; Rohwer Formosa 1376; Silvestri India 1503; Timberlake Japan 1610; Turner India 1656; Waterston Straits Settlements 1735.

Lepidoptera.

Bell 120; Ellis 491; Godfrey 667; Hampson 710; Hannyngton 713; Meyrick 1087, 1093; Nagano Japan 1141, 1142; Nire Japan 1179; Oberthür E. Tibet 1191; Prout 1296, 1298; Rothschild 1388, 1393; Rothschild & Jordan 1394; Strand Formosa 1548; Swinhoe 1578, 1579; Warren 1727, 1728; Wileman Formosa 1772, 1773, 1774; Wileman & South Japan 1776; Wileman & South Formosa 1777.

Trichoptera.

Navás 1150; Ulmer 1670.

Diptera.

Bezzi 150; Edwards 479, 482; Edwards Formosa 483; Felt 537, 538; Kieffer Formosa 881; Matsumura Japan 1058; Newstead 1170; Ricardo 1344, 1345; Townsend 1634.

Hemiptera.

Bergroth 133; Crawford 371; Distant 426, 427, 428, 430; Goot 675; Green 685; Kuwana Japan Coccidae 930; Muir Formosa 1133, 1134.

Thysanoptera.

Bagnall 72, 73; Williams 1780.

Paraneuroptera.

Bartenev 105; Laidlaw 940, 941; Ris Formosa 1356.

Orthoptera.

Carl 263; Chopard 305, 308; Giglio-Tos 633; Griffini 691, 692.

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Asiatic Archipelago.

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Insecta, collectively.

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Hymenoptera.

Cameron 259; Cockerell 332, 337, 348; Girault 636, 653, 657; Grandi 681; Kieffer 882, 883, 884, 885, 886, 887; Meade-Waldo 1063; Roepke 1371, 1374.

Lepidoptera.

Bethune-Baker 145; Eecke, 487; Fruhsorfer 595, 596; Hampson 710, 711; Gaede 615; Joicey Noakes & Talbot 846; Joicey & Talbot 847, 852; Jordan 854; Martin 1050; Meyrick 1087; Prout 1296, 1298; Roepke 1366, 1369; Rothschild 1391; Rothschild & Jordan 1395; Swinhoe 1578, 1579; Warren 1727; Wileman 1775.

Trichoptera.

Ulmer 1670.

Neuroptera.

Roepke 1367.

Diptera.

Malloch 1038; Meyere 1066, 1068; Salm 1416, 1417; Smit 1516; Strickland 1551, 1552; Townsend 1634.

Hemiptera.

Baker 86; Bergroth 133; Crawford 371; Distant 427, 428, 429, 430, 432, 433; Funkhauser 609; Malenotti 1034; Muir 1134; Poppius 1285; Rutherford 1409.

Thysanoptera.

Karny & Docters van Leeuwens-Reinvaan 867.

Lipoptera.

Ferris 552.

Isoptera.

Oshima 1212.

Paraneuroptera.

Ris 1350.

Orthoptera.

Carl 263; Bruner 239; Giglio-Tos 633.

Australia and Tasmania.

Insecta, collectively.

Poulton pp. ci-cxii Pr. Ent. Soc. London 1915.—†Tillyard 1603.

Coleoptera.

Achard 6; Aurivillius 55; Auzat 57; Bernhauer 139; Carter 268, 269; Champion 282, 283, 288, 291; Ferguson 546; Lea 956; Mjöberg 1105, 1106; Weise 1744.

Hymenoptera.

Cockerell 328, 329, 330, 346, 347; Dodd 448; Girault 641, 651.

Grandi 681; Santschi 1426; Turner 1656, 1658, 1659, 1660, 1661, 1663; Wheeler 1762, 1763.

Lepidoptera.

Hampson 710; Lower 995, 996; Meyrick 1087; Prout 1296; Turner 1648, 1649, 1650, 1651; Warren 1727.

Trichoptera.

Martynov 1054.

Neuroptera.

Tillyard 1606, 1608.

Diptera.

Edwards 484; Hardy 715; Taylor 1589; Townsend 1627, 1634, 1636; White 1765, 1766.

Aphaniptera.

Rothschild 1387.

Hemiptera.

Bergroth 131, 132; Distant 429, 431.

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Thysanoptera.

Bagnall 72, 73; Hardy 716.

Lipoptera.

Cummings 384; Harrison & Johnston 733.

Ephemeroptera.

Ulmer 1672, 1673.

Paraneuroptera.

Tillyard 1605.

Orthoptera.

Carl 263; Giglio-Tos 633.

North America.

Insecta, collectively.

Chrystal 314; †Cockerell 338; Du Porte 465; Dury 467; Ferris 551; Gibson 628; Giffard 632; Taverner 1588; Treherne 1643; Walker 1722; Weiss 1748.

Coleoptera.

Barber 100; Blatchley 162, 163; Blatchley & Leng 164; Casey 270, 271, 272; Champion 283, 288; Dury 466; Frost 593; Germain 623; Glasgow 666a; Harris & Leng 720; Hopkins 790; Johnson 842; Leng, Castle Florida p. 92 J. N. York Ent. Soc. 24; Morris Niagara Glen pp. 293-300 Canad. Ent. 48; Nicolay Maine p. 309 J. N. York Ent. Soc. 24; Schaeffer 1436; Slosson Connecticut p. 125 Ent. News 27; Swaine 1568, 1570, 1571; Van Dyke 1684; Wickham 1770; †Wickham 1770a; Woodruff & Davis New York *Malachiidae* p. 1553 J. N. York Ent. Soc. 24.

Hymenoptera.

Ackerman 11; Andrews 44; Andrews California Formicidae p. 421 Ent. News 27; Banks 97; Bradley 202, 203; Brues 230, 233; Cockerell 322, 324, 328, 329, 331, 332, 334, 336, 340, 342, 343, 345; Crawford 373, 374, 375; Doane 439; Fyles 611; Gaige 616; Girault 636, 637, 638, 639, 642, 643, 644, 646 to 650, 654, 655, 656, 658, 660 to 665; Lutz 1011; Mickel 1096, 1097; Rohwer 1375; Sladen 1512, 1513; Smith South Carolina Formicidae p. 468 Ent. News 27; Smith & Morrison South Carolina ants Ent.

News 27 p. 110; Swenk 1573, 1574; Timberlake 1610; Viereck 1704, 1705, 1706; Weiss New Jersey 1749; Williams 1787.

Lepidoptera.

Allen 30; Barnes & McDunnough 103, 104; Beutenmuller 148; Braun 205, 206; Dod 446, 447; French 579; Gibson 626; Hampson 711; Meyrick 1087; Quaintance & Wood 1304; Reed 1322; Saunders 1432; Skinner 1510; Swett 1576; Winn 1793; Wright 1800, 1801.

Diptera.

Aldrich 17; Alexander 21, 23, 24, 25; Banks 95; Banks Greene McAtee & Shannon 98; Brues 231, 232; Cole 353, 354; Cockerell 341; Cockerell & Andrews 349; Cresson 380, 381; Dietz 425; Dyar 471, 472; Felt 536, 537, 539, 540, 542; Felt in Woods 1796; Ferris 554; Hine 774; Johannsen 837; Johnson 839, 840; Jones 853; Knab 905, 906; Knab & Shannon 907; Malloch 1037; Metcalf 1083; Parker 1222, 1223, 1224, 1225; Schaeffer 1435; Shannon 1485, 1486; Smith 1518; Sturtevant 1566; Swenk 1575; Townsend 1626, 1628, 1629, 1630, 1634, 1635, 1637a; Van Duzee 1682, 1683.

Hemiptera, collectively.

Van Duzee 1681.

Heteroptera.

Abbott 1; Drake 459; Knight 908; McAtee 1018; Osborn & Drake 1209; Parshley 1229, 1230; Van Duzee 1679, 1681, Japanese Tingitid Weiss Canad. Ent. 48 p. 255.

Homoptera.

Ball 87, 88; Davis 397, 398; Horsfall 791; Gibson Mississippi *Jassidae* Canad. Ent. 48 p. 177; Weiss *Tibicen* in New Jersey Ent. News 27 p. 337 map.

Aphidae.

Baker & Davidson 80; Gillette & Bragg 634.

Aleyrodidae, Coccidae.

Quaintance & Baker 1303; Dietz & Morrison 424; Hollinger 782.

Elliptera.

Ferris 553.

Thysanoptera.

Hood 784, 786, 788; Watson 1737.

Plecoptera.

Needham & Smith 1163.

Paraneuroptera.

Bartenev 105, 106; Howe 794; Walker Ontario p. 314 Canad. Ent. 48.

Orthoptera.

Allard 29; Allard Virginia Canad. Ent. 48 pp. 356-358; Caudell 273; Hebard 744, 746, 747, 748, 749; Morse 1122; Rehn & Hebard 1325, 1326; Somes 1523.

Collembola.

Folson 569.

Central America.

Insecta, collectively.

Cockerell Lower California p. 469 Ent. News 27.

Coleoptera.

Aurivillius 55; Casey 272; Champion 288, 291; Pic 1267.

Hymenoptera.

Cockerell Coronado Islands 339; Girault 638, 645, 662; Meade-Waldo, 1063; Turner 1656.

Lepidoptera.

Cockerell 329; Dognin 452; Dyar 470; Joicey & Talbot 849; Prout 2197; Rothschild 1389; Rothschild & Jordan 1394; Schaus 1438.

Diptera.

Alexander 23, 25; Cresson 380; Knab 902; Sturtevant 1566; Swenk 1575; Townsend 1634.

Hemiptera.

Ball 88; Bergroth 133.

Orthoptera.

Carl 263; Hebard 745, 746, 750, 752; Rehn 1324.

Zoraptera.

Silvestri 1501.

Antilles.

Coleoptera.

Casey 272; Champion 282; Grouvelle 695, 700; Leng & Mutchler 971; Marshall 1046, 1047; Pic 1267, 1270.

Hymenoptera.

Brues 229; Girault 638, 640, 642.

Lepidoptera.

Hampson 710; Holland 779; Prout 1297; Schaus 1438.

Diptera.

Alexander 23, 26; Cresson 380; Sturtevant 1566.

Thysanoptera.

Hood 784, 789.

Paraneuroptera.

Kahl 863.

Orthoptera.

Bruner 237; Carl 263; Hebard 746, 747, 752; Holland & Kahl 780.

South America, including Trinidad.

Insecta, collectively.

Beebe 119; Bodkin & Cleare 171; Jorgensen 860; Navás 1149, 1153, 1155; Roman 1381; Tavares 1583.

Coleoptera.

Bernhauer 140, 143; Bickhardt 152; Bourgoin 199; Brèthes 213, 214; Bruch 228; Champion 282, 283, 286, 287, 288, 289, 291; Desbordes 415; Escomel 511; Grouvelle 695; Hyslip 812; Lameere 948; Lima 980; Marshall 1047; Minck 1101; Pic 1260, 1267, 1270.

Strepsiptera.

Hoffmann 776.

Hymenoptera.

Brèthes 209, 212; Cockerell 322, 329, 333, 335, 337; Crawley 376; Gallardo 618; Girault 636, 638, 652, 662; Mann, 1039a; Santschi 1425; Tavares 1582; Wheeler 1756, 1761, 1764a.

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Lepidoptera.

Dognin 452; Fassl 530, 531, 532, 533; Fruhstorfer 606; Hampson 710, 711; Joicey & Talbot 849; Jordan 855; Mengel 1073; Meyrick 1087; Oberthür 1191; Pfeiffer 1252; Prout 1297; Rothschild 1389, 1391; Schaus 1438; Skinner 1511; Stichel 1542, 1543, 1544; Thierry-Mieg 1597; Whittle Argentina p. 106, Entomol. 49.

Diptera.

Alexander 22, 23, 26; Bezzi & Tavares 151; Brèthes 210, 211; Cresson 380; Dyar & Knab 474; Hermann 764; Sturtevant 1566; Tavares 1584, 1585; Townsend 1624, 1630, 1634.

Hemiptera.

Bergroth 133; Delétang 405; Green 684; Poppius 1285; Quaintance & Baker 1303.

Lipoptera.

Cummings 385; Kellogg 872.

Paraneuroptera.

Ris 1351, 1355; Williamson 1788, 1789, 1790.

Orthoptera.

Bruner 237; Carl 263; Chopard 304; Giglio-Tos 633; Hebard 746, 747, 751; Rehn 1324.

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Cicindela hudsonica p. 29, *shermani* p. 30, *lincolniana* p. 32, *prolixa*, *fontinaria* p. 33, spp. n., Am. bor.; also the following subsp. n., *ancocisconensis eriensis* p. 29, *macra topekana* p. 31, CASEY T.c.—*C. cardini* p. 690 pl. ix. f. 3, *cubana* p. 696 f. 8, spp. n., Cuba, LENG & MUTSCHLER Bull. Amer. Mus. 35.—*C. melancholia* var. *caucasicola* n.n. pro *aegyptiana* Klug (non Dejean) p. 25, *trisinigata* Mingrelia p. 26, *litterata*

karnakovi subsp. n. Caucasus p. 27, *campestris pontica* Transcaucasia descriptio p. 29, LUTSHNIK Bull. Mus. Cauc. 9.—*C. germanica* ab. n. *michaelensis* p. 518, BOLIVAR Bol. Soc. espan. 16.—*C. hirticollis* var. n. *thodensis* p. 93, CALDER J. N. York ent. Soc. 24.—*C. hybrida* Flügeldeckenskulptur, SCHULZE D. ent. Zs. 1915 p. 247-255.—*C. campestris*, natural history, HUIE pp. 1-10 Pr. Physic. Soc. Edinburgh 20.

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Carenidium utrum p. 622, *bifurcum* p. 623, *pertenue*, *frenchi*, p. 625, spp. n., Australia, SLOANE P. Linn. Soc. N.S.W. 41.

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larva pl. ix f. 17, NAGANO Bull. Nawa Ent. Lab. 1.

Dixophlebia fulvithorax sp. n. Colombia p. 4, DOGNIN Lep. Het. 11.

Drepana bouvieri, *robusta*, p. 372, *agna* p. 373, *opalescens* p. 374, *ocellata*, *pulvis*, p. 375 E. Tibet, spp. n. ?, OBERTHÜR Et. Lep. comp. 12. [These species are figured in vol. 13, 1917, pl. 428.]—*D. falcataria obscura* f. n., STAUDER Zs. wiss. Insektenbiol. 12 p. 111.

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Lambula contigua, *hypopolius*, Dampier isld., *plumicornis* Admiralty islds., p. 323, *dampierensis* p. 332, spp. n., ROTHSCHILD Nov. zool. 23.

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Cerocala albimacula sp. n. Somaliland p. 126 pl. i f. 42, HAMPSON P.Z.S. 1916.

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Chabora inoa Cayenne p. 318, *tepetalis* Mexico p. 319, spp. n. SCHAUS P.U.S. Nat. Mus. 50.

Chalcamistis gen. n. *Acronyctinae*, *autoplusia* sp. n. Mexico, DYAR p. 17 P.U.S. nat. Mus. 51.

Charadra patafex, *oligarchia*, spp. n. Mexico p. 19, DYAR T.c.

Chaudica meeki New Guinea, *schistipennis* Celebes, spp. n., WARREN p. 214 Nov. zool. 23.

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Chionoanthes leucophaea sp. n. Somaliland p. 115 pl. i f. 23, HAMPSON P.Z.S. 1916.

Chirconia gen. n. p. 319, *aquilalis* p. 320 Amer. centr., sp. n., SCHAUS P.U.S. nat. Mus. 50.

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pl. lxi f. 8, JOICEY & TALBOT Tr. ent.
Soc. London 1915.

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pyralina sp. n. Somaliland pl. i f. 35,
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versa, GAEDE D. ent. Z. Iris 29 p. 101-
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Kei isl., *venusta* Simla. *apicebrunnea*
Assam, *venusta* (sic) Burma, spp. n.
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Ectocheila nigrilineata, albilunata,
roseitincta, flavilunata, aberrans, spp. n.
Africa, GAEDE D. ent. Zs. Iris 29
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p. 14, *umbrifer, milio, nisio, ratelusis,*
p. 15, spp. n. Mexico, DYAR P.U.S.
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Ipnista gen. n. p. 372 for *Ipnea marina* Dr., SCHAUS P.U.S. nat. Mus. 50.

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Melanchra olivea sp. n. N. Zealand, WATT p. 413 Tr. N. Z. Inst. 48.

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Omphalagria togoensis sp. n. Africa, GAEDE D. ent. Z. Iris 29 p. 101-123, 1915.

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Orthosia blidaensis sp. n., *ruticilla* var. n. *fuliginosa*, STERTZ D. ent. Zeitschr. Iris 29 p. 123-132, 1915.

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Panarenia gen. n., *subhirsuta* sp. n. Peru, SCHAUS p. 303 T.c.

Panolis griseovariegata, *Vivipertit*, *Spermatophore* (Russ.), JACENTKOVSKI Rev. russ. ent. 14 pp. xcix-ciii.

Panthea coenobita ussuriensis subsp. n., WARNECKE Neue Beitr. system. Insektenk. 1 p. 32.

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Poppaea gen. n. Noctuidae, *sabina* sp. n. f. 5 E. Africa, FAWCETT p. 722 P.Z.S. 1916.

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Tarache mesoleuca pl. i f. 38, *miogonia* f. 39, spp. n. Somaliland p. 123, HAMPSON P.Z.S. 1916.

Tarista albiapicalis sp. n. Amer. mer. p. 342, SCHAUS P.U.S. nat. Mus. 50.

Taveta gen. n. Noctuidae, *syrix* sp. n. E. Africa f. 13, FAWCETT p. 718, P.Z.S. 1916.

Tephrias trigonosema sp. n. Somaliland p. 134 pl. ii f. 2, HAMPSON P.Z.S. 1916.

Tetanolita hermes sp. n. Paraguay p. 308, SCHAUS P.U.S. nat. Mus. 50.

Thalatha melanostrotata sp. n. Somaliland p. 104 pl. i f. 4, HAMPSON P.Z.S. 1916.

Thursania aristarioides Cuba p. 282, *renilinealis*, *espiritualis*, Amer. mer., p. 283, *voodooalis*, *hobsonalis*, p. 284, *miaralis*, Cuba, *chiriquialis* Panama, p. 285, *tiguralis* Peru, *grandirenalis* Venezuela, p. 286, spp. n., SCHAUS P.U.S. nat. Mus. 50.

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Trachea brunneicosta sp. n. New Guinea p. 377 pl. lxi f. 7, JOICEY & TALBOT Tr. ent. Soc. London 1915.

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Trichestra albirena sp. n. Costa Rica p. 11, DOGNIN Lep. Het. 11.

Trichorthosia aselenograptia, clarcana, spp. n. Mexico p. 10, DYAR P.U.S. nat. Mus. 51.

Tyana magniplaga, elongata, Sikkim, *marina* Borneo, spp. n., WARREN p. 215 Nov. zool. 23.

Tympanistis rufimaculata sp. n. Assam p. 220, WARREN T.c.

Ulochlaena sagittata, schaeferi, reducta, ferruginea, spp. n. Africa, GAEDÉ, D. ent. Z. Iris 29 p. 101-123, 1915.

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Westermannia equina Kei isld., *interrupta* Solomon islds., spp. n., WARREN p. 220 Nov. zool. 23.

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Xylomiges simplex = (*pallidior* Sm.), DOD, p. 367 Canad. Ent. 48.

Zagorista gen. n. for *Drobeta debora* Dr., SCHAUS p. 318 P.U.S. nat. Mus. 50.

Zorothis gen. n., *zacualpana*, p. 391, *dissimilis* p. 392, spp. n. Mexico, SCHAUS T.c.

GEOMETRIDAE (Incl. URANIIDAE, EPIPLEMIDAE, CYMATOPHORIDAE).

Annotated list and figures of species described by Guenée (continuation); OBERTHÜR Et. Lep. comp. 12 pp. 67-94 pls. 382-401. Pp. 101 et seqq. are occupied by descriptions that may be of new forms.

Abraxas; variabilité de la nervulation, KOZMINSKIJ Bull. Soc. entom. Moskva 1 pp. 91-94.—*A. cophia* sp. n. New Guinea p. 75, PROUT Nov. zool. 23.

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Boarmia perse sp. n. E. Africa p. 728 f. 18, FAWCETT P.Z.S. 1916.—*B. gonophora* p. 177 pl. xxv. f. 36 sp. n., with ab. *albimacula* p. 178 f. 37, PROUT Ann. Trsv. Mus. 5.—*B. (Serraca) sponsa* sp. n. Tibet p. 55, PROUT Nov. zool. 23.—*B. gemmaria* ab. n. *nigerrima* p. 188 pl. i, MOREAU Bull. Soc. ent France 1916.—*B. umbraria* var. n. *vaucheri* p. 48, THIERRY-MIEG Miscell. ent. 23.—*B. concentraria* var. n. *thelia* p. 52, THIERRY-MIEG Miscell. ent. 23.—*B. cinctaria* f. n. *schulzei*, HEINRICH Intern. ent. Zs. Guben 10 p. 124.

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Summanus gen. n. near *Pulaha* p. 117, *indicus* sp. n. p. 118, DISTANT App.

Tambinia verticalis p. 47 India, *rubromaculata* p. 48 Ceylon, spp. n., DISTANT App.

Tetrica nigromaculata sp. n. India p. 92, DISTANT App.

Thabenoides gen. n. Issinae, *albino-tatus* sp. n. India, DISTANT p. 90 App.

Tropidocephala nigrocacuminis p. 374, *baguioensis*, *pseudobaguioensis*, p. 375, spp. n. Philippines, MUIR Philipp. J. Sci. D. 11.

Tubilustrum gen. n. Issinae, *typicum* sp. n. Burma, DISTANT p. 86 App.

Usana abdominalis sp. n. Sikkim p. 61, DISTANT App.

Zoraida fletcheri n. n. for *variipennis* Dist., DISTANT p. 65 App.

Ueber die Flatinae: *Semidalis* gen. n., *micholitzii* sp. n.; *Gyaria bispinosa* sp. n.; *Phantia rufula* sp. n.; *Mimophantia carinata* sp. n.; *Cryptoflata angulata* sp. n.; *Geisha sauteri* sp. n.; *Salurnis formosanus* sp. n.; *Lawana lilacina* sp. n.; *Mesophylla alba* sp. n.; *Melicharia specularis* sp. n.; *Seliza angulifrons* sp. n.; *Atracis mucida*, *formosana* spp. n., JACOBI D. ent. Zs. 1915 p. 157-178.

Kritische Bemerkungen über Ricaniinae: *Ricania melichari*, *sublimata*, *opistholeuca*, spp. n.; *Pochazia iridea* sp. n.; *Semesra* gen. n., *costaricensis* sp. n.; *Sqaemis* gen. n., *encaustica* sp. n.

Vurciousis gen. n., *nigricoxis* sp. n.;
JACOBI D. ent. Zs. 1915 p. 299-314.

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Philippine *Membracidae*, FUNK-
HOUSER Philipp. J. Sci. D. 10 1915 pp.
365-405 2 pls.

Acanthusus nivalis, festivus, spp. n.
Australia p. 28, DISTANT Ann. Nat.
Hist. 18.

Amitrochates gen. n. p. 326, *grahami*
sp. n. W. Africa p. 327 fig., DISTANT
Op. cit. 17.

Anchonoides gen. n., *typicus* sp. n.
Ceylon p. 162, DISTANT App.

Antialcidas gen. n. for *Centrotus tri-*
foliaceus Walk., DISTANT p. 326 Ann.
Nat. Hist. 17.

Azac gen. n. for *Membracis bipun-*
tata Fabr., DISTANT p. 43 fig. op. cit.
18.

Arimanes gen. n. near *Ceraon*, *dory-*
ensis sp. n., DISTANT p. 290 T.c.

Aspasiana gen. n. p. 26 near *Sertorius*,
carbonaria sp. n. New Guinea p. 27,
DISTANT T.c.

Baraumas gen. n., *primus* sp. n.
Mashonaland, DISTANT p. 157 op. cit.
17.

Basilides gen. n. for *Centrotus bipennis*
Walk., DISTANT p. 149 T.c.—*B. bipen-*
nis = (*Anchon albolineatum* Buckt.),
DISTANT p. 314 T.c.

Beaufortiana gen. n. p. 30 near *Cent-*
rotus cornuta, difficilis, spp. n. Cape
Colony p. 31, DISTANT op. cit. 18.

Cebes gen. n. near *Sertorius*, *godingi*
sp. n. Australia, DISTANT p. 39 T.c.

Centrochares borneensis, bucktoni Phi-
lippines, spp. n. p. 314, DISTANT Ann.
Nat. Hist. 17.

Centrotus marshalli p. 154, *laxatus*
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—*C. bovinus, shoanus*, Africa, *matan-*
gensis Borneo, spp. n. p. 323, DISTANT
T.c.—*C. talumensis* sp. n. Siam p. 292,
DISTANT Ann. Nat. Hist. 18.—*C. densus*
W. to *Eufairmairia*, *C. acer* W. to *Tri-*
centrus, DISTANT p. 293 T.c.

Centrotusoides gen. n. p. 29, *muiri*,
wealei, spp. n. S. Africa p. 30, DISTANT
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—*C. boweringi* sp. n. Penang p. 291,
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Centruchus mutilus sp. n. Burma p.
169, DISTANT App.

Coccosterphus paludatus sp. n. India
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Convector gen. n. near *Indicopleustes*,
cuwendus sp. n. India, DISTANT p. 153
App.

Crito gen. n. near *Ebhul. festivus* sp.
n. Queensland, DISTANT p. 43 Ann.
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Dacaratha gen. n. near *Emphusis*,
nyasana sp. n., DISTANT p. 319 Ann.
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Ebhul formicarius sp. n. Burma p.
169, DISTANT App.—*E. carinatus* sp.
n. Mindanao p. 393 pl. ii f. 17, FUNK-
HOUSER Philipp. J. Sci. D. 10 1915.

Eligius gen. n. p. 152, *merinjakensis*
sp. n. Borneo p. 153, DISTANT Ann.
Nat. Hist. 17.

Emphusis perarmatus sp. n. India p.
156, DISTANT App.—*E. agnatus* sp. n.
Siam p. 319, DISTANT Ann. Nat. Hist.
17.—*E. bakeri* sp. n. Mindanao p. 381
pl. i f. 7, FUNKHOUSER Philipp. J. Sci.
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Enchenopa binotata, var., MATAUSCH
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Eufairmairia gen. n. for *Centrotus*
decisus W., *harrisi*, p. 35, *velatus*,
fraternus, p. 36, *consobrinus* p. 37,
distinctus, cupreus, p. 38, spp. n. Aus-
tralia, DISTANT Ann. Nat. Hist. 18.

Eufrenchia falcata, synonymy, Dis-
TANT p. 153 Ann. Nat. Hist. 17.

Eutryonia monstriker = (*Hypsoprora*
cassisi Buckt.), DISTANT p. 23 Ann.
Nat. Hist. 18.

Gargara contraria p. 170, *confusa*,
India, *extrema* Ceylon, p. 171, *splen-*
didula, caelata, India p. 172, spp. n.,
mixta var. n. *nandidrugana* p. 171,
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Goddefroyinella gen. n. near *Xiphistes*,
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Godingella gen. n. p. 31 near *Sarantus*, *queenslandensis* sp. n. p. 32, DISTANT T.c.

Gondopharnes gen. n. near *Otinotus* type *Centrotus piceus* Walk., DISTANT p. 321 Ann. Nat. Hist. 17.

Gongroneura confusa sp. n. Usambara, DISTANT p. 23 Ann. Nat. Hist. 18.

Hamma pattersoni sp. n. Gold Coast p. 157 fig., DISTANT Ann. Nat. Hist. 17.

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Insitor gen. n., *exemplificatus* sp. n. India, DISTANT p. 176 App.

Leptocentrus obortus Burma p. 154, *scutellatus*, *bajulans*, p. 155, India, spp. n., DISTANT App.—*L. confusus*, *ugandensis*, *peracatus*, spp. n. Africa p. 151, DISTANT Ann. Nat. Hist. 17.—*L. aureo-maculatus*, *grossus*, spp. n. Uganda p. 315, DISTANT T.c.—*L. thelwalli*, *australis*, spp. n. Africa, DISTANT p. 24 Ann. Nat. Hist. 18.—*L. albonotata* India p. 289, *abdullah* Siam p. 290, spp. n., DISTANT T.c.

Lestarches gen. n. for *Centrotus forticornis* Walk., DISTANT p. 318 Ann. Nat. Hist. 17.

Lobocentrus = (*Dograna* D.), DISTANT p. 293 Ann. Nat. Hist. 18.

Machaerotypus pallescens p. 173, *nuwarana* p. 174, spp. n. Ceylon, DISTANT App.

Maurya gen. n. for *Centrotus gibbosulus* Walk., DISTANT p. 326 Ann. Nat. Hist. 17.

Occator gen. n. near *Machaerotypus*, *erectus* sp. n. India, DISTANT p. 174 App.

Olaris, merged in *Tricentrus*, DISTANT p. 328 Ann. Nat. Hist. 17.

Otinotoides gen. n. type *Centrotus pallipes* Walk., DISTANT p. 320 T.c.—*O. australis* p. 40 Australia, *solomonensis*, *intermedius*, p. 41, *spicatus* p. 42, Australia, spp. n., DISTANT Ann. Nat. Hist. 18.

Otinotoides; *Centrolus flavipes* and *contractus* Walk. to; DISTANT p. 292 T.c.

Otinotus campbelli, *badius*, p. 158, *albomaculatus*, *mimicus*, p. 159, *brevicornis* p. 160, *transversus* p. 161, spp. n. India, DISTANT App.—*O. nigrorufus* p. 153, *recurvus*, *curvidens*, p. 154, spp. n. Africa, DISTANT Ann. Nat. Hist. 17.—*O. doddi*, *albosignatus*, spp. n. Australia p. 40, DISTANT Ann. Nat. Hist. 18.

Oxyrhachis formidabilis p. 146, *mangiferana*, *lefroyi*, p. 147, *binsarus* p. 148, spp. n. India, DISTANT App.—*O. lamborni* p. 19, *pandatus*, *nigropictus*, p. 20, Africa, *yeburyi* Aden p. 21, spp. n., DISTANT Ann. Nat. Hist. 18.

Parapogon insignis sp. n. Ceylon p. 153, DISTANT App.

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Periaman pilosus sp. n. India p. 157, DISTANT App.—*P. wallacei* sp. n. Borneo p. 320, DISTANT Ann. Nat. Hist. 17.—*P. brevifrons* sp. n. Palawan p. 383 pl. i f. 8, FUNKHOUSER Philipp. J. Sci. D. 10 1915.

Platybelus sinuosus sp. n. Africa p. 155, DISTANT Ann. Nat. Hist. 17.—*P. escaleranus* p. 324, *gowdeyi*, *africanus*, p. 325, *insignis* p. 326, spp. n. Africa, DISTANT T.c.

Pogon albosignatus sp. n. Ceylon p. 161, DISTANT App.

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Polonius gen. n., *biseratensis* sp. n. Siam, DISTANT p. 291 Ann. Nat. Hist. 18.

Pyrgonota pinguiturris sp. n. Luzon p. 374 pl. i f. 3, FUNKHOUSER Philipp. J. Sci. D. 10 1915.

Sarritor gen. n., *retusus* sp. n. Burma, DISTANT p. 182 App.

Sertorius affinis, *castaneus*, p. 25 Australia, *insularis* New Britain p. 26, spp. n., DISTANT Ann. Nat. Hist. 18.

Sextius bucephalus, *reticulatus*, *major*, p. 34, *atromaculatus* p. 35, spp. n. Australia, DISTANT T.c.

Sipylus dilatatus = (*nodipennis* Funkh.), DISTANT p. 330 Ann. Nat. Hist. 17.

Spaltrises gen. n. for *Centrotus alticornis* Jac., DISTANT p. 29 Ann. Nat. Hist. 18.

Stictolobus gen. n. for *Membracis subulata* Say, METCALF p. 2 pl. i Ent. News 27.

Subrincator gen. n., *tonkinensis* sp. n., DISTANT p. 157 Ann. Nat. Hist. 17.

Telingana cognata p. 149, *ornandu campbelli*, p. 150, *balteata*, *travancor-ensis*, p. 151, *consobrina* p. 152, spp. n. India, DISTANT App.—*T. recurvata* sp. n. Borneo p. 288, DISTANT Ann. Nat. Hist. 18.

Tricentroides gen. n., *proprius* sp. n. Assam, DISTANT p. 169 App.

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Tricoceps (= *Tambusana* Dist.), *curvispina* sp. n. Congo, DISTANT p. 322 T.c.

Tshaka undulatus sp. n. Mashonaland p. 324, DISTANT T.c.—*T. obortus* sp. n. Pretoria p. 42, DISTANT Ann. Nat. Hist. 18.

Xiphistes crassus sp. n. Mashonaland p. 313, DISTANT Ann. Nat. Hist. 17.—*X. australasiae* sp. n. S. Australia, DISTANT p. 21 Ann. Nat. Hist. 18.

Xiphopoeus erectus sp. n. Uganda p. 152, DISTANT Ann. Nat. Hist. 17.

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Argentine *Cercopidae*, DELÉTANG pp. 263–271 Physis 2.

Abdas gen. n. near *Aphrophora*, *nuncupatus* sp. n. India, DISTANT p. 191 App.

Abidama scutellata sp. n. Assam p. 199, DISTANT App.

Aphrophora nuwerana Ceylon, *trifasciata* India, spp. n. p. 190, DISTANT App.

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Aufidus shillonganus p. 204, *conterminus* p. 205, spp. n. Assam, DISTANT App.

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Paphnutius gen. n., *ostentus* sp. n. India, DISTANT App. p. 200.

Philaeus hottentoti sp. n. S. Africa p. 175, COGAN Ohio J. Sci. 16.

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Vigilantius gen. n., *fascialis* sp. n. India, DISTANT App. p. 203.

Xenaias gen. n., *notandus* sp. n. India DISTANT App. p. 198.

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Athysanus aethiopica p. 189 pl. vii f. 2, *eriocephalus* p. 190 f. 3, *cyclopia* f. 4, *nemesia* pl. viii f. 1, p. 191, **spp. n.** Cape Town, COGAN Ohio J. Sci. 16.—*A. calvatus* p. 173, *shustus* p. 174, *escalantus*, *lassus*, p. 175, **spp. n.** U.S. BALL Ent. News 27.

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Busonia scutellaris p. 327, *mindanaensis* p. 328, figs., **spp. n.** Philippines, BAKER Philipp. J. Sci. D. 10 1915.

Bythoscopus magnus **sp. n.** India p. 227, DISTANT App.

Chlorotettix delta **sp. n.** Arizona p. 205, BALL Ent. News 27.

Chunra niveosparsa, varr. n. *philippinensis*, *palawanensis* and *lagunensis*, p. 325 figs., BAKER Philipp. J. Sci. D. 10.

Cicadula longiforma **sp. n.** Cape Town p. 196 pl. xi f. 3, COGAN Ohio J. Sci. 16.

Columbanus **gen. n.**, *misranus* **sp. n.** Bengal, DISTANT App. p. 224.

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Idiocerus hewitti **sp. n.** Grahamstown p. 180 pl. iv f. 3, COGAN Ohio J. Sci. 16.

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Ipocerus **gen. n.** p. 322, *kirkaldyi* **sp. n.** Palawan p. 323 fig., BAKER T.c.

Iposcopus **gen. n.**, *distanti* figs. p. 320, *breviceps* p. 322, **spp. n.** Mindanao, BAKER T.c.

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Typhlocyba bergmani **sp. n.** Norway p. 67, TULLGREN Ent. Tidskr. 37.—*T. purpureatincta* pl. x f. 3, *mallyi* pl. xi f. 1, p. 198, *elegia* f. 2 p. 199, **spp. n.** Cape Town, COGAN Ohio J. Sci. 16.

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Dynopsylla minor sp. n. Luzon p. 263 fig., CRAWFORD T.c.

Homotoma pacifica p. 262, *bakeri* p. 263, spp. n. Luzon figs., CRAWFORD T.c.

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d/ *Megatrioza* gen. n., *armata* sp. n. Mindanao fig., (CRAWFORD p. 264 Philipp. J. Sci. D. 10 1915.

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Pauropsylla bakeri p. 258 Luzon, *floccosa* p. 259, *spondiasae* p. 260, Ceylon, *orientalis* p. 261 Luzon, spp. n. figs., CRAWFORD T.c.

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INCLUDING

ENTEROPNEUSTA AND PTEROBRANCHIA

BY

C. TATE REGAN, F.R.S.

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(GENERAL)

i.e., complementary to Mammalia, Aves, Reptilia, and Pisces

BY

D. S H A R P,

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XVI. REPTILIA AND BATRACHIA

ARRANGED BY

C. TATE REGAN, F.R.S.

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ARRANGED BY

MARTIN A. C. HINTON.

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